AMERICAN

RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, *Editor.*

SATURDAY, MARCH 8, 1856.

Second Quarto Series, Vol. XII., No. 10.---Whole No. 1,038, Vol. XXIX.

ESTABLISHED IN 1831.

NEW-YORK:

PUBLISHED WEEKLY, BY

JOHN H. SCHULTZ & CO.

Front Room, Third Floor,

No. 9 Spruce Street.

ROOFING.

Plate 4.

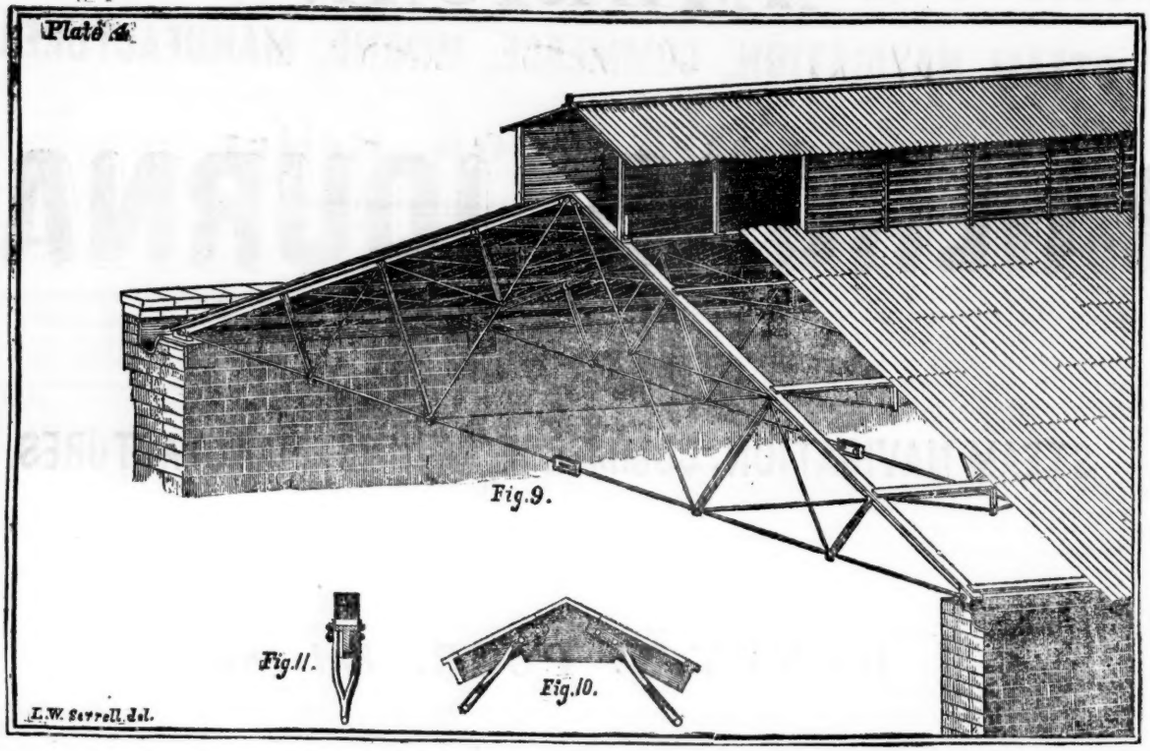


Fig. 9.

Fig. 11.

Fig. 10.

L.W. Serrell, del.

THE subscribers, manufacturers and importers of PATENT GALVANIZED TINNED IRON, respectfully invite the attention of railroad companies and others interested in the construction of Fire-proof Buildings and Roofs, to this material, which is highly recommended for strength, durability, and lightness, combined with elegance in appearance.

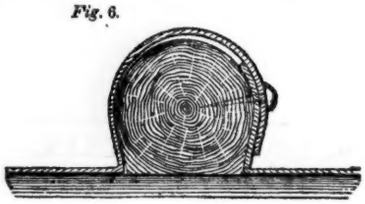
The advertisers can refer particularly to Roofs they have erected in the New York Navy Yard, also to that of the New Jersey Railroad and Trans. Company, Jersey City. In Great Britain it is used at all the railroad depots and navy yards in enormous quantity.

The corrugated sheets, as on the above iron framed roof, are equally suited to lay upon wood framing, either straight, or curved.

Plain sheets are prepared to lay on boarded roofs (such as have had tin coverings) by making a flute on the side so as to fasten to a wood roll, reaching from ridge to eaves and placed between each tier of sheets, see *figs.* 6 and 8 below. The transverse joints are secured as shown by *fig.* 7.

Estimates and designs for Buildings and Roofs, &c., &c.

Fig. 6.

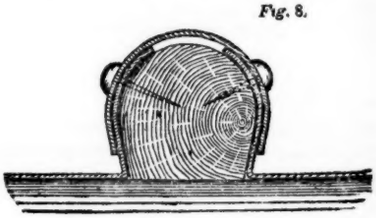


¼ *full size.*

Fig. 7.

¼ *full size.*

Fig. 8.



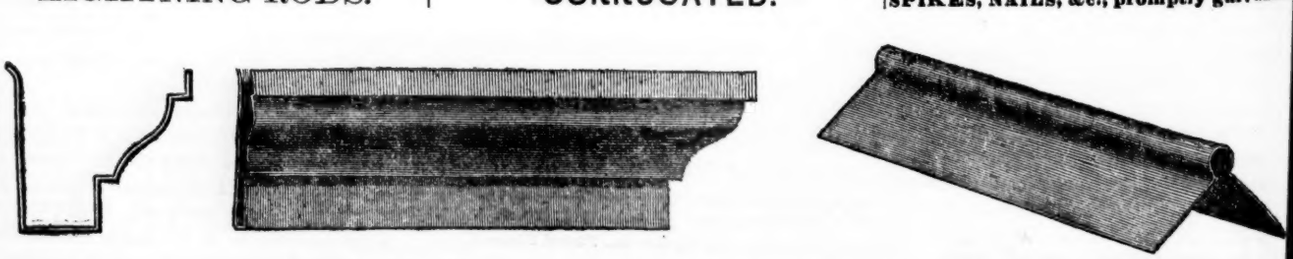
¼ *full size.*

Galvanized Iron Cornices to any size or pattern, Ridge Caps, and Spouts.

TELEGRAPH AND FENCING WIRE,
LIGHTNING RODS.

BLACK SHEET IRON
CORRUGATED.

SHIPS' IRON WORK
SPIKES, NAILS, &c., promptly galvanized



MARSHALL LEFFERTS & BROTHER,
Corner of Broad and Beaver sts., NEW YORK.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE

SECOND QUARTO SERIES, VOL. XII., No. 10.] SATURDAY, MARCH 8, 1856. [WHOLE No. 1,038, VOL. XXIX.

☞ MESSRS. ALGAR & STREET, No. 11 Clements Lane, Lombard Street, LONDON, are the authorised European Agents for the *Journal*.

PRINCIPAL CONTENTS.

Railroad Management....145
Railroads in New York....147
Sunbury and Erie Railroad....148
Strength of Compound Beams....152
Wind as a Motive Power....153
Journal of Railroad Law....154
New Orleans and Opelousas Railroad....155
La Crosse and Milwaukee Railroad....156
Explosion of Steam Boilers....156
Atlantic and Gulf Railroad....157

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, March 8, 1856.

Railroad Management.

ECONOMY.—LOCOMOTIVE FUEL.

Twenty five years ago the railroad system was in its infancy. It has drawn rapidly towards a mature manhood, and if we are to credit the signs of the times illustrated in the recent proceedings of some of the oldest companies in the country, we must believe it to have passed its prime and be tottering along in trembling dotage. To return at this day in the direction of stage coach prices in making up a passenger tariff, is certainly "disseminating into the dark ages." We have supposed that as men grow older they grow wiser. But we were unsophisticated. We have learned better. Men do not even grow more cunning,—they become desperate, rash and imprudent. Of course, we mean railroad men. Once it was found that four cents a mile paid more dividend than the law allowed, and so they have fallen gradually till two cents a mile has in the most thickly settled parts of the country become a common rate for railroad travel. Some dividends have been earned at this rate, and under competent administration it has been supposed the price would pay.

In order to tempt travel and insure full trains it has been customary to sell season tickets at considerable discount to parties going to and fro daily. The principle is sufficiently correct. If a train must be run to accommodate 100 passengers at 2 cents per mile each, why not as well accommodate 200 at the same time for 1½ cent per mile. Moreover, if men can be tempted into the purchase of residences in the suburbs of the large cities, the railroads will do an increased freighting and passenger business in the dense suburban districts independently of the commuters' traffic. This seemed wise at the time and the effect produced was just what was anticipated. Thus for instance of one city—Boston—it is said that at night there are left within its borders more foreign than native residents, yet the suburbs for miles are as one living village. Now comes the retrograding. It is discovered to be poor policy to encourage this habit of peopling the neighborhood. A check must be put upon that sort of progress, and so the tariff as regards commuters must be raised.

Of course it would be unjust to say that accomplished swindlers had graduated from any of these railroad schools—to point at Schuyler or Tuckerman, as evidence of what these roads can produce in the way of dishonest dealings; we shall do nothing of that sort. Nor shall we even hint, that of all persons on whom the prices should be raised commuters are the very last, because they have been influenced to invest in land in the country by the bribe of commutation; because they have become pleasantly settled, have gathered themselves into the comfortable folds of a home, cheaper than city life as well as more wholesome. We shall not suggest that there is more than a tacit contract existing between the parties carried and carrying under such circumstances. If we did, unpleasant suspicions might be raised.

People, who do not own railroad stock, would be tempted to say, it has become unpopular for railroad officers to cheat their own companies and so they have turned on us. They have us safe in their clutches,—we have invested our money in lands and houses in the country, there are our homesteads and our families, while our business lies in the city; we must travel daily between the two points,—there is no help for it; *we must go and we must come.* The companies are sure of us. No rival lines can bring us protection as they protect through passengers. This is dishonest,—they have cheated us.

We say we fear the people might talk something after this sort. Such language would be harsh and disagreeable; we would prefer not to hear it. We shall therefore only say it is impolitic and utterly unnecessary, and betrays either a lack of capacity on the part of the officers of a company, or of energy and enterprise in the management and inspection of the company's business.

What we have hinted at as leading to the proposition, namely, that this is the *easiest* way to rescue a sinking concern, is undoubtedly the true statement of the case, though it is glossed over by specious reasoning. The commuters are in the power of the companies, and the management of that power ought to be in accordance with the nicest principles of honor. We do not assume the position of advocate for the commuter. The matter is one of fact. The Railroad companies having certain exclusive privileges granted by the public, agree to perform certain services in return therefor. The public connot demand accommodations that will entail loss on the companies. Men have been seduced by the offers of cheap transportation to move their residences into the country. They are now permanently settled there. If, with *competent management*, the present tariff does not pay a fair profit, the companies are justified by every correct principle in abandoning, what we shall call, their contract with the public. Before they take this step they are under high obligations to analyse thoroughly the principles of management by which they have been governed.

To suggest an examination of this sort that may lead to a practical result in the economical working of a road, is our present purpose. Without indulging in loose guesses, let us attempt an analysis of the operations of certain roads, having in view at the same time a definite object, that our search be not at random.

We take the Reports of twelve important lines that have been in operation a sufficient length of time to impart value to their experience. The following tabular statement is compiled from the returns of the last year. It exhibits the great characteristics of the Roads sufficiently for purposes of comparison—gives the number of miles run by all the trains during the year, and the number of times every mile of the road may have been run over. The working expenses do not include

the salaries of President, Treasurer, &c., but do include wages of conductors, and all persons engaged in the practical operations. It does not include the amount paid for damages, taxes, insurance, interest, *new* cars or *new* locomotives. It is really as near as may be the actual cost of operating the road, supposing it fully equipped and stocked.

The column of Earnings exhibits the gross earnings for the year.

Another column shows for what percentage of the earnings the road has been operated, and is the ratio between the amounts in the two preceding.

The next, gives the cost of fuel per mile run, during the twelve months reported.

The last two columns show, first, what would be the cost of working if the amount spent for fuel were uniform at 20 cents per mile run, and second, what in that case would be the proportion of earnings used, in operating.

The Boston and Worcester Railroad, with a movement of over 12,000 miles per mile of length, has been worked for 50 per cent. of its earnings. This could never have been done without the commutation system, which has made the line of that road one vast village—filling profitably every train and multiplying their number over short lengths of the track. This class of passengers will be found to pay more for the work done on their account than any other department of the business.

Some of the roads indicated are subjected to a very moderate taxation for their fuel. It is interesting to notice this fact carefully. The Ogdensburg Railroad passing along the northern edge of a great wilderness, finds upon nearly the whole length of its line, the most abundant supplies, costing little more than the expense of preparation—the expense per mile being 6.9 cents.

The Erie Railroad, going through much wild country, but frequently entering large towns that demand the wood for their own uses, is subjected to hauling it considerable distances, and the price amounts to 13.8 cents per mile.

The New York Central, on the main stem—one village from Albany to Buffalo, but with its branches and feeders to bring in, and thus keep down the price of the home article, manages to supply itself this year for 16.1 cents per mile run.

The Fitchburg Railroad, running through a densely settled region while near Boston, sends its auxiliaries up into Vermont and Western New Hampshire, and draws thence its supply at a slightly advanced cost on the New York Central Railroad, preparing and distributing at 18.5. cts.

The Boston and Maine road condemned at the southern extremity to the expensive habits of its neighbors in this respect, but redeemed by the facilities for procuring wood at the Eastern end, manages to work along with a fuel bill of 20 cents per mile.

At this point every road should cease burning wood. Much sooner than this, indeed, but we mean that at this point experience is full and complete as to the use of coal.

If we refer to the Report of the Baltimore and Ohio Railroad for the year 1854, we shall find that the fuel bill was but 5.3 cents per mile run. The wood used cost $1.79 per cord, while the coal was procured for 98 cents per ton, and an expense of $32,722 was incurred for the preparation of fuel. Now we find that if we estimate coal at $6.00 per ton, and the wood $6.00 per cord, the fuel bill would have been 20 cents per mile run; but if the wood had been held at this rate, the coal would have been exclusively used, and instead of 36,853 cords of wood, and 74,738 tons of coal for the year 1854, we should have had 66,747 tons of coal only, since one ton of the latter is found for purposes of vaporization to be worth 2½ cords of the best pine wood, and the price of fuel per mile run would have been 12.5 cents. We might have stated this as the figure beyond which with wood we should not go; but as the number might have been conceived empirical, we choose to go further with wood in order to satisfy those intensely practical gentlemen who only see what merits them.

We might state a lower figure than 12.5 cts. per mile, if it were possible to estimate the amount of waste that occurs in the use of coal, in a country where its cost does not exceed $1.00 per ton.—We know it is immense, though we should not presume to state its amount, since we do not desire to build up a theory, but simply present facts for practical operation. Nevertheless, we advise to bear this point in mind.

Another important consideration is to be found in the fact, that with a Cumberland coal fire the blast orifice of the Engine may be made much larger than in the ordinary case of a wood fire.—Thus, on the Centipide, a new Engine just built by Winans of Baltimore—cylinders, 22x22—the diameter of the exhaust nozzle is about 5 inches, whereas, in a wood Engine of the same dimension of cylinder, the orifice might be used of 3 inches diameter, but not more. Now, at twenty miles per hour, the back pressure, making waste of power when the Steam Gauge indicates 100 lbs. per square inch in the boiler, would be 3.2 lbs., or 3.2 per inch loss of the whole power; while with an orifice of 5 inches diameter, the loss would be but 0.5 lbs., or ½ per cent., making on a piston of 22 inches diameter, a difference of 1,026 lbs. pressure; which, referred to the drivers of 42 inches diameter, amounts to 342 lbs., an amount of power wasted that would draw 56 gross tons on a level road. The same is true of Boardman's boiler and furnace. The Engine now in use on the Providence and Worcester Railroad is built with an Exhaust of 4 inches; whereas, 2½ is common for that size of cylinder.

But we propose that these companies shall make no experiments. Let them take the coal machines as they exist now, and they can run them for less than 20 cents per mile. But suppose it to cost fully that amount, what will be the saving over the present cost of working these roads? This may be seen by reference to the last two columns of the table, in which, as previously remarked, the cost of fuel is assumed at 20 cents per mile.

The saving in the case of the Boston and Providence road amounts to 9 per cent. of the total operating expenses—and on the Hudson River road, to 2 per cent.; a large sum however, as the expenses for working this road are enormous.

To the Boston and Worcester Railroad, which does a heavier business than any road on the table, the saving is 4 per cent.

We do not design this statement for the purpose of instituting invidious comparisons between the management of the different roads. So many modifying circumstances affect the figures on which operating expenses are founded, that the comparison of one road with another as to the skill of its management, amounts to little. However, here are the figures, and if any choose to speculate on the results shown, they are free agents.

NAME OF COMPANY.	Length of Road in Miles.	Total Rise and Fall of Gradients in ft.	Total Curvature in Degrees.	Number of Miles run dur'g 12 months.	Miles run per Mile of L'ngth of Road.	Work'g Exp'ns's per Mile in Dollars.	Gross Earnings per Mile in Dollars.	Per centage of Earnings required to operate.	Cost of Fuel for Mile run, in Cents.	Work'g Expenses per Mile in Dol. (The cost of fuel being supposed uniform at 20c. per mile run.)	Per'c'ge of Earn. req'd to operate.
Boston and Lowell.....	27.7	163	773	295,517	10,668	1.060	1.660	64	26.2	0.998	60
Boston and Maine	75.3	1,644	2,445	588,016	7,743	0.814	1.657	49	20.0	0.814	49
Boston and Providence....	55.5	822	758	316,238	5,700	1.090	1.766	62	34.8	0.942	53
Boston and Worcester.....	44.6	1,030	3,203	541,528	12,142	1.020	1.861	54	28.0	0.940	50
Boston and Fitchburg	67.8	896	2,985	451,944	6,666	0.932	1.572	59	18.5	0.947	60
Old Col. and Fall River.....	87.3	1,531	1,710	408,107	4,674	0.855	1.601	53	22.5	0.880	52
Providence and Worcester..	43.4	582	2,547	196,183	4,520	0.958	1.588	53	24.3	0.915	58
Western.....	155.4	2,085	6,370	1,021,163	6,570	1.109	1.880	60	23.8	1.071	60
Hudson River.....	144	Not rendered.		929,748	6,457	1.222	2.011	60	25.4	1.168	58
New York Central.....	556	Do.	do.	3,654,574	6,580	0.868	1.782	49	16.1	0.907	51
New York and Erie*.....	464	8,056	22,252	3,181,878	6,860	0.781	1.706	45	13.8	0.843	49
Northern (Ogdensburg).....	122	2,445	751	320,316	2,525	1.100	1.625	67	6.9	1.221	75
Baltimore and Ohio† } For the Reading† .... } year 1854	....	....	....	....	....	....	....	..	5.3 16.5	....	..

* Expense of Telegraph included in this acc't.

† Wood $1.79 per cord } + $32,722 for preparing.
Coal 98c. per ton }

‡ Wood and Coal together.—More than half the fuel bill on the Reading Railroad is for wood which is kept at a cheap rate by the competition of coal.

If the coal used had been $5 per ton and the wood $6 per cord, the cost of fuel would have been 22.2 cents per mile run.

Railroads in New York.

(Continued from Page 148.)

TROY & GREENBUSH R. R.

This line is leased by the Hudson River Company No statement as to characteristics, &c., has been returned, as the books and papers were recently destroyed. On leasing the road the balance of construction above the amount of capital stock paid in, was paid out of the previous earnings. The whole indebtedness of the road was liquidated, and no debt has since been contracted.

Total length of line, six miles. No double track. One engine and one freight house. Six locomotives. Three passenger and three baggage cars.—No freight cars. Miles run by passenger trains, 47,706; and by freight, 11,772. Passenger carried, 216,193; tons of freight 80,245.

Passenger earnings	$29,527
Freight do	48,990
Other sources	3,142
Total	$81,659
Expenses	52,008
Balance	$29,651

The annual rent paid by the Hudson River company is $19,275, which is equal to seven per cent. on the capital of $275,000. From this income two semi-annual dividends of 3½ per cent. each were paid.

One person was killed at a road crossing.

Jonathan Edwards is President, Philander Wells, Treasurer; H. R. Hubbell, Secretary; and E. S. Morgan, Superintendent. Principal office at Troy, N. Y.

TROY & UNION R. R.

The stock of this road is owned, one-fourth by each of the four railroads, running into Troy. By the terms of agreement, the city of Troy was to issue its bonds for an amount sufficient to construct the line, for which the Union company made a mortgage of their whole property in the place to the City of Troy to secure the latter for the bonds issued. The four railroad companies guarantee each the payment of one-fourth of these at maturity. Under this agreement the city issued $707,000 six per cent. bonds, payable at various dates up to January, 1873. The company own no rolling stock or machinery. The tolls for the last year were $84,878.

Capital authorized, $30,000, of which have been paid in, $3,000. Par value of shares, $100. Funded debt $707,000; floating do., $17,344. The items of cost were—

Graduation, masonry, and bridges	$155,213
Superstructure, including iron	47,634
Depots, stations, &c	119,900
Land, damages, and fences	394,375
Engineering, salaries, &c	14,310
	$731,432

The length of road from Greenbush railroad to Hoosic bridge is two miles. Laid with double track. Weight of rail used, 65 lbs. per yard. Sum of ascents and descents, 57 feet. Maximum gradient, 94 feet per mile. Minimum radius of curvature, 500 feet.

George Gould is President; James Forsyth, Secretary and Treasurer; and Alexander McCoy, Superintendent. Principal office in Troy, New York.

TROY & BOSTON R. R.

Authorized capital, $1,000,000, of which $510,000 have been subscribed, and $437,830 paid in. Par value of shares, $100. Cash realized from sale of stock, $351,493, exclusive of 880 shares issued in payment of work done. The funded debt amounts to $497,000, and the floating debt to $236,079, making a total of $737,079. The first consists of $300,000 seven per cent. first mortgage bonds, issued July 1st, 1851, and maturing in 1861; and $197,000 seven per cent. second mortgage, issued in 1852, and falling due—$20,500 in April, 1860, and $176,500 in April, 1864. The floating debt also bears seven per cent. Cost of road and equipment, $1,109,822. No estimate of present value is given. Length of road, 34¾ miles, of which 27¼ are laid, with 3¼ of sidings and double track. Weight of rail per yard, 65 lbs. The company own four shops, six locomotives, four first class passenger, four baggage and mail, and 78 freight and gravel cars. They have also leased 5⅓ miles of the Troy and Bennington road, from Hoosic Falls Junction to the Vermont State Line; and 1¾ miles of the Western Vermont road, making a little over seven miles in all. The longest bridge is 170 feet; and three others have an aggregate of 643 feet.

Sum of ascents and descents, 793 feet, or an average of 23 feet per mile. Maximum grade per mile, 40 feet for four and a half miles. Sum of straight lines, 25¼ miles. Degrees of curvature, 829. Minimum radius, 1,910 feet for nine and a half miles. Engines in use, six. Cars, 100 of all kinds.

During the year, 53,248 miles were run by passenger, and 23,374 by freight trains. Number of passengers carried, 191,514; tons of freight, 61,975. The earnings were—

Passengers	$70,617
Freight	80,334
Other sources	5,412
	$156,363
Operating expenses, rent, &c	101,179
Net gains	$55,184
Appropriated as follows:	
Interest on debt	$44,797
Amount carried to surplus fund.	9,353
	54,150
Balance	$34

One employee was killed by falling from a freight train while in motion. No other accidents.

D. T. Vail is President; George Gould, Secretary and Treasurer; and Isaac V. Baker, Superintendent. Principal office at Troy, N. Y.

RENSSELAER & SARATOGA R. R.

The authorized capital of this corporation, is $600,000—all paid in. Par value of shares, $100 each. Funded debt, $140,000 at seven per cent., secured by a first mortgage, and due July 1st, 1863. No floating debt. Total cost of road, equipment, &c., $896,423. Length from Troy to Ballston, 25¼ miles, and of sidings, 2 miles. Rail, 58 lbs. per yard. Four engine houses and shops. Number of locomotives, 6; of first class passenger cars, 12; of baggage, mail, and express do., 12; of second class and emigrant do., 3; and of freight cars, 64. The company have leased the Saratoga and Schenectady road, 22 miles long.

Sum of ascents and descents, 510 feet, or an average of 20 feet per mile. Maximum grade, 34⅓ feet. Length of straight lines, 15⅓ miles. Degrees of curvature, 1,151. Minimum radius, 415 feet, for a few yards only. Miles run, 62,892 by passenger, and 30,588 by freight trains. Passengers carried, 187,124. Tons of freight, 52,695.—The earnings, including those of the Saratoga and Schenectady road, were—

Passengers	$143,133
Freight	67,180
Other sources	30,836
Total	$241,149
Trans. expenses	$128,399
Interest	9,800
Dividends, (7 per cent.)	42,700
	180,899
Balance	$60,250

From this were paid for rents—$29,798, to the Schenectady, and $9,185 to the Troy Union railroad company.

Three fatal accidents—in all cases from trespassing on the track, while the train was in motion.

The principal officers for this present year are: Ed. Scriver, President and Treasurer; C. R. Richards, Secretary; and L. H. Tripper, Superintendent. Principal office at Troy, N. Y.

SARATOGA & SCHENECTADY R. R.

Authorized capital, $300,000—all paid in.—Shares, $100 each. Funded debt, $109,000, consisting of two issues, each bearing seven per cent. interest, and payable at various dates. Cost of road, equipment, &c., $480,020. Length, 21 miles, exclusive of 1½ of sidings. Rail, 56 and 65 lbs. per yard. Number of engine houses and shops, 2; of locomotives, 2; of passenger cars, 3; and of freight cars, 10. One mile of the New York Central, from Schenectady to the Junction, is leased by the company.

Sum of ascents and descents, 187 feet, or nine feet per mile. Maximum gradient, 22.7 feet. Sixteen miles are straight. Degrees of curvature, 563. Minimum radius, 500 feet.

The company receive annually, as rent from the Rensselaer and Saratoga road, $30,150, from which were paid last year—

Trans. expenses, (salaries, &c.)	$2,282
Interest	7,805
Dividends, (five per cent.)	15,000
Surplus, (applied to payment of No. 2 bonds)	5,000
	$30,087

No accidents reported.

L. G. B. Cannon is President; Ed. Schriver, Treasurer and Secretary; and L. H. Tupper, Superintendent. Principal office at Troy, New York.

SARATOGA & WHITEHALL R. R.

Authorized capital, $500,000—all paid in.—Shares, $100 each. Funded debt $395,000, consisting of the following issues, all bearing seven per cent.

No. 1—$25,000, issued April, 1848, and maturing March 1st, 1858. Secured by mortgage.

No. 2—$100,000, issued September, 1849, and maturing in September, 1856. Secured by mortgage on Rutland and Whitehall branch.

No. 3—$45,000, issued in June, 1855, and maturing in March, 1858. No mortgage.

The property of the old company was sold in April last, on a foreclosure of the second mortgage, and purchased by the bondholders, who took possession of it on the 8th of June.

There is no floating debt.

Length of road, 41¼ miles; of double track and sidings, 3¾; and of branches owned by the company, 6½ miles; making a total of 51½ miles. Weight of rail per yard, 56 lbs. Number of engine houses and shops, 3; of locomotives, 8; of passenger and baggage cars, 16; and of freight cars, 80. The company lease 6¾ miles of the Rutland and Whitehall road from State line to Castleton.

Sum of ascents and descents, 826 feet. Other characteristics not given.

During the year, 18,174 miles were run by passenger, and 11,285 miles by freight trains. Number of passengers carried, 57 051; tons of freight, 18,019. The earnings were—

Passenger	$51,774
Freight	17,360
Other sources	2,775
Total	$71,909
Trans. expenses	$49,820
Interest	7,830
To surplus fund	14,256
	71,909

No fatal accident reported. The breaking of a rail caused a train to be thrown off the track, by which several persons were injured.

John M. Davison is President and Superintendent; and Wm. H. Warren, Secretary and Treasurer. Principal office at Saratoga Springs, New York.

TROY & BENNINGTON R. R.

Authorized capital, $80,000, of which $75,600 have been subscribed, and $74,100 paid in.—Shares, $100 each. Funded debt, $160,500, consisting of three issues, two of which amounting to $116,900, at seven per cent., mature in 1862, and the third at six per cent., in 1871. The first two are secured by mortgage; and the third is convertible. The floating debt is $13,015. Cost of road and buildings, $248,261. The road is leased to the Troy and Boston company for 20 years, with the privilege of purchasing at cost. They keep it in proper repair at their own cost, and engage to return it in good condition at the end of the lease. Rent payable semi-annually, seven per ct. on $100,000, and six per cent. on the balance of its cost.

Length of road, 5⅓ miles. Rail, 60 lbs. per yard. No rolling stock. No double track.

Total ascents and descents, 166 feet, or 33 feet per mile. Maximum gradient, 44 feet. One-half consists of straight lines. Earnings, &c., included in the Troy and Boston road.

Lyman Bennett is President, and G. M. Selden, Secretary and Treasurer. Principal office at Troy, N. Y.

SACKETT'S HARBOR & SARATOGA R. R.

Capital authorized, $6,000,000, of which $4,800,000 have been subscribed, and $254,100 paid in. Shares, $100 each. The funded debt consists of $400,000, seven per cent. bonds, secured by a mortgage on the road, its equipment, and 500,000 acres of land. Date of issue, Sept., 1854; and of maturity, August, 1879. The amount of floating debt is $29,974.

The cost of road, equipment, &c., at date, is put at $629,729. Estimated value, $622,729. Length, when completed, 182 miles. Sum of ascents and descents, 3,029 feet, or 16.6 per mile. Maximum grade, 44 feet, for less than one mile. Minimum radius of curvature, 1,146 feet for less than 1¼ miles. No other characteristics given.

The principal officers for the present year are: Charles A. Macy, Vice President; G. W. Stanton, Jr., Treasurer; Ed. D. Saxton, Secretary; A. F. Edwards, Chief Engineer; and J. B. Mills, Consulting Engineer and Superintendent. Principal office at 24 William-st., N. Y.

WHITEHALL & PLATTSBURGH R. R.

Capital, as by articles of association, $1,000,000. Amount subscribed, $94,000, on which have been paid in, $9,390. Expenses for surveys, &c., $6,385. Nothing further, beyond the preliminary surveys, has been done this present year.

SECOND-AV., (N.Y.) R. R.

Authorized capital, $800,000, which has all been subscribed, and $357,600 paid in. Shares, $100 each. Funded debt, $261,000; floating do., $109,141; making a total of $370,141, bearing seven per cent. interest. Few particulars regarding the first of these are given. Cost of road, equipment, &c., $426,323. Estimated value of property, $130,250. Weight of rail per yard, 72 lbs. Number of horses and mules, 300; and of passenger cars, 51. Length of main line, from Peck Slip to Harlem, 9 miles. Miles run by passenger cars, 98,550. Passengers carried, 3,547,660. The total earnings were $174,883; transportation expenses, $62,628, exclusive of the cost of repairs and renewal of pavement, &c., which are charged to *construction*; as also $14,763 interest on funded and floating debts. The sum of $6,300 from earnings, was applied to dividends. Of these, two were declared of four per cent. each, amounting to $19,000.

Four persons were killed, and twenty injured.

Denton Pearsall is President; William Coleman, Treasurer; Philip C. Rogers, Secretary; and D. J. Sherwood, Superintendent. Principal office at corner of Forty-second street and Second avenue, New York.

THIRD AVENUE (N. Y.) R. R.

Capital stock, $1,170,000—all subscribed and paid in. Shares, $100. Funded debt, $40,000, at seven per cent., issued January, 1855, and due in 1870. Cash realized, $32,500. Secured by mortgage on all the property. A sinking fund of $7,000 per annum to be created after January, 1860. No floating debt. Cost of road and equipment, $1,170,000, that being the amount for which it was purchased from a private partnership.

Length of road, from Broadway and Ann street to Harlem, 7¾ miles, of which 5¾ are laid. Weight of rail used, 72 lbs. per mile. Miles run, 923,076. Passengers carried, 5,770,078. Total earnings, $292,475. Total operating expenses, $217,838, besides $6,838 for interest. The sum of $104,136 was applied to the payment of floating debts. Total, persons killed, 2; injured, 4; two of the latter being passengers.

Wm. A. Darling is President; Amory Edwards, Treasurer and Secretary; and Wm. H. Schenck, Superintendent. Principal office at corner of 61st St. and 3rd Av., N. Y.

SIXTH AVENUE (N. Y.) R. R.

Authorized capital, $750,000, in shares of $100 each,—all subscribed and paid in. Funded debt, $4,780. No floating debt. Total cost of road, equipment, &c., $786,658. Estimated value, $749,855. Length, 3¾ miles, all laid with double track. Rails, 74 lbs. per yard. Number of shops, 4; of horses and mules, 328; and of cars, 48. Miles run by passenger cars, 871,255; passengers carried, 4,237,583. Earnings, $212,456. The various payments were—

Trans. expenses	$165,235
Interest	505
Floating debt paid	11,000
Dividends (3½ per cent.)	26,250
Surplus	9,466
Total	$212,456

Three persons injured, while on the track.

Sidney Mason is President; G. W. Leake, Treasurer; T. B. Myers, Secretary; and Wm. Ebbitt, Superintendent. Principal office at corner of 44th St. and 6th Av., N. Y.

NORTHERN (OGDENSBURGH) R. R.

Capital stock, as by charter, $2,000,000, which has all been subscribed, and $1,633,022 paid in. Shares, $50 each. The funded debt amounts to $4,173,900; and the floating to $230,374; making a total of $4,406,874, bearing seven per cent. interest. The funded debt consists of—

No. 1—$1,497,400, issued April, 1849, payable April 1st, 1859. Cash realized, $1,441,129.

No. 2—$2,676,500, issued in April, 1851, matures in April 1st, 1861. Cash realized, $2,122,552.

Both issues are secured by mortgages on the real and personal property and franchises of the company. The floating debt has been due since September 30th, 1854.

Construction.

Graduation, masonry, and bridging	$2,004,855
Superstructure, including iron	1,126,356
Buildings, &c	410,770
Land, damages and fencing	140,006
Machinery and rolling stock	694,392
Engineering and agencies	129,705
Miscel's expenses	155,501
Wharves	72,268
Interest to stockholders	736,861
Total	$5,470,714

The length of the main line is 118 miles, 17¾ of which are laid with double track. The company also own branches from Summit to Gravel Bed, from Champlain to River Landing, and from Pottsdam to Lumber Mills, the total length of which is 3¾ miles. Rail used, 56 lbs. per yard.—Number of engine houses and shops, 5; of locomotives, 27; of passenger and baggage cars, 23; and of freight cars, 615.

Road all ballasted. Cross-ties, 2,100 per mile. Chairs per mile, 586, of 22 lbs. each.

Sum of ascents and descents, 2,445 feet, or an average per mile of 20¾ feet. Maximum grade, 39.6 feet, for 12,800 feet. Total straight line, 89¼ miles. Total degrees of curvature, 751. Minimum radius, 2,000 feet, for one quarter of a mile.

During the year, 117,862 miles were run by passenger, and 194,039 by freight trains. Passengers carried, 78,868; tons of freight, 162,016. The earnings were—

Passengers		$115,107
Freight		355,463
Other sources		49,853
		$520,153
Transportation expenses	$384,399	
Interest on 1st mort. bonds	54,417	
Interest on float'g debt	1,963	
Payment of funded debt	2,600	
		$443,409
Balance		$76,744

No interest was paid on the second mortgage bonds;

Two employees were killed, and two wounded.

W. R. Lee is President; George V. Hoyle, Vice President and Superintendent; S. C. F. Thorndike, Treasurer; and J. G. Hopkins, Secretary.—Principal office at Malone, Franklin county, New-York.

EIGHTH AVENUE (N. Y.) R. R.

Authorized capital, $800,000, of which have been subscribed and paid in $762,500. Shares, $100 each. The road with all its fixtures, rights, &c., and real estate valued at $200,624, was purchased, in January, 1855, for $800,000. Of the property an interest to the extent of 3-64th, has not yet been conveyed to the company. Its estimated value is—

Roadway and track complete	$475,000
Real estate	200,624
Horses, mules, harness, &c.	77,500
Cars	48,800
Total	$801,924

Length of road about 10 miles, of which nearly five are laid. Rail, 72 lbs. per yard. Number of passenger cars, 61. Miles run by cars last year, 655,000. Passengers carried, 4,311,676. Total earnings, $215,583. The expenses were $132,592 for transportation, and $44,110 for dividends. One person was killed by jumping in front of the cars, while in motion.

George Law is President; David Palmer, Sec'y and Treasurer; and Oliver Charlick, Superintend't Principal office at corner of 8th Avenue and 49th Street, N. Y.

NEW YORK & NEW ROCHELLE R. R.

Authorized capital, $1,000,000, of which $27,100 have been subscribed, and $2,310 paid in. Shares $100. Expenses, $1,095, chiefly for charter purposes. The line has been surveyed, but nothing further done.

Oliver Slate jr. is President; and Geo. S. Robins, Treasurer. Principal office at 40 Wall st., N. Y.

FLUSHING R. R.

Capital stock, as by charter, $200,000—all subscribed, and $133,132 paid in. Shares, $20 each. Stock paid to contractors, for right of way, &c., $51,960. Funded debt, $211,000; floating debt, $39,866; making a total of $250,866. The first consists of the following issues, bearing 7 per cent. interest:

No. 1—$159,000, issued September, 1853; due Sept. 1st, 1868. Cash realized, $145,500. Secured by first mortgage on road and franchise.

No. 2—$52,000, issued November, 1854; due November 1st, 1864. Cash realized, $31,600. Secured by second mortgage on road, equipment, &c., and made convertible into stock at par.

The floating debt bears ten per cent. interest, and is payable at various dates from one to thirteen months.

Cost of road, equipment, &c., $310,962. Estimated value, $308,987. Length, 7.8 miles. Rail, 56 lbs. per yard. No double track. Number of engine houses and shops, 2; of locomotives, 2; and passenger and baggage cars, 8; and of freight cars, 6. Two miles of the road are laid on pile work over salt marshes. Sum of ascents and descents, 167 feet, or 22 feet per mile. Maximum grade, 46¾ feet. Sum of straight lines, 5¾ miles Degrees of curvature, 297. Minimum radius, 955 feet. Miles run by passenger trains, 30,048. None by freight trains. Passengers carried, 235,525. Earnings, $39,432. The expenses were—

Passenger and freight	$21,313
Steamboat and stage expenses	17,589
Total	$38,902

Besides this, there were paid for interest on funded debt, $11,203.16; and on floating debt, $5,386. No dividends.

One employee was killed and one wounded from jumping off the cars while in motion. No other accidents reported.

William Smart is President; D. S. Williams, Treasurer; S. B. Parsons, Secretary; and W. M. Smith, Superintendent. Principal office at Flushing, N. Y.

Sunbury and Erie Railroad.

An interesting correspondence between a number of prominent citizens of Philadelphia, largely interested in this work, and S. V. Merrick, Esq., has lately taken place, resulting in changes of much consequence to the road. Mr. Merrick, from the success which attended his efforts in behalf of the Pennsylvania road, was strongly urged to assume the Presidency of the Sunbury and Erie. In his reply, he agrees to accept on the following conditions:

"*First.* The resignation of every Director elected at the recent annual meeting of the company.

Second. The surrender of all the existing contracts on work where payments were stipulated for in the stock or bonds of the company.

Third. An agreement on the part of the contractors not to vote the stock held by them at the meetings and elections of the company.

In these stipulations I intended neither disrespect for, nor censure of, any one hitherto connected with the administration of the affairs of the company; but they seemed to me to be necessary, because:

Partial changes of the direction had hitherto failed to accomplish the desired results.

Contracts. payable in stock or bonds, largely enhance the cost of any public work, and to the extent that they may be used in payment, diminish profitable returns on the cash capital.

The power of contractors to control elections and meetings of the company by the votes due to their stock, deters individuals and corporations from subscribing, and engenders feelings of jealousy and distrust that it is impossible to overcome."

These views have all been acceded to, and that gentleman is now about to undertake the chief management. On his qualifications for such a trust, and the prospects of the work, the *Commercial List* says:

"Mr. Merrick enters upon his career as President with a clear field for the exercise of those qualities with which he is so plenteously endowed. He is emphatically a practical man in the most comprehensive sense of that term. His education and training has been such as to fit him for all stations which require cool judgment united with comprehensiveness of perception, and accurateness of conclusions. In addition to these facts, Mr. Merrick was for several years connected with the Directorship of the Pennsylvania railroad, and thus had an opportunity of maturing those powers which are necessary in the chief officer of a great enterprise—such as the one he has now been called to preside over.

With such a President and Board of Managers as now control the affairs of the Sunbury and Erie railroad, there can be no question that it will receive a full share of public confidence and support. The letter of the President shows that his whole heart is in the work, and the basis on which the new administration is formed, justifies the confident belief that the road will be pushed forward with all possible despatch. The enterprise has always been a pet one with us, as well as the people of this city and State. That feeling is well founded. It must, when completed, reimburse in a most liberal manner all those who have contributed their means to aid it in its infancy. But above all will the opening of this avenue benefit the whole trade and commerce of this port. It will enable us to reach the Lakes at a point second to none on those vast inland seas, which are becoming the channels of communication between the East and West, and hence it is that the citizens of Philadelphia are so deeply and anxiously solicitous with reference to the management of the enterprise."

Population of St. Louis.

Full returns of the sensus of the population of this city hvae been made, and the following result is presented:

First Ward	20,286
Second do	17,704
Third do	15,342
Fourth do	18,549
Fifth do	16,344
Sixth do	20,395
Seventh District	4,889
Eighth do	6,186
Ninth do	2,233
Total population	121,928

The population of the city, independent of that of the three districts added to it by the act of the late Legislature, is ascertained to be 103,620, and exhibits an increase within the last year of fully eleven thousand. We have not yet examined the returns with a view to determine the accuracy with which the census has been taken, but we suppose that the duty has been faithfully performed. At any rate, we are satisfied with the progress we are making towards becoming a great city, and are content with being reckoned as the seventh city in the Union, with the certainty of coming up if not surpassing three, if not four, of them by the year 1860.

Debts and Liabilities of Virginia.

The Committee on Finance of the Virginia House of Delegates have made a report relative to the revenues, liabilities, expenses &c., of the Commonwealth. From this we learn that the total outstanding funded debt, bearing interest, is $24,489,400, the semi-annual interest on which is $271,253. The State is pledged for various matters, aud is guarantor for bonds issued by several cities and internal improvement companies; so that the total liabilities as principal and guarantor is $35,068,639.

The demands upon the Treasury for the present fiscal year will exceed the probable receipts by $1,659,606, which the committees propose to meet by way of taxation. The increase upon the present amount of taxes will be 84.7 per ct.

The State holds stock in banks and internal improvement companies to the amount of $27,686,621, put down at their par value, but the actual income from them has only been, for 1844-5 the sum of $413,628.

The committee urge the propriety of looking into the true condition of the Treasury, alleging that all the resources of the Commonwealth, with its sixty-one thousand square miles of fertile land its million and a half of industrious inhabitants, are ample to sustain a much larger debt." Vigorous remedies are therefore urged, on the ground that the first principle of a sound financial system is to provide for the ordinary and regular necessities of the year by taxation within the year.

A re-assessment of the lands of the State is likely to be made, a bill for that purpose having passed the Senate. A considerable amount will be raised from this source, but will not be collected until 1857-8. In the meantime the committee deem it a duty to place the Treasury beyond the possibility of failing in any of its obligations.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of $100.

NAME OF COMPANY.	Length of Road.	Capital paid in.	Debt.	Total cost of road & equip't.	Gross Earnings for last official year.	Net Earnings for do.	Dividend for do.	Price of Shares.
Atlantic & St. Lawrence	149	1,538,100	2,973,700	6,019,929	470,647	--------	6	63
Androscog. & Kennebec	55	642,343	1,473,080	2,245,020	190,605	90,797	none	18
Androscoggin	20	91,192	232,193	343,317	29,396	12,807	none	20
Kennebec & Portland	56	1,114,725	1,661,236	2,470,600	--------	--------	none	14
Portl., Saco, & Portsm'th	51	1,367,000	119.237	1,486,327	259,330	124,038	6	88
Boston, Conc. & M'ntreal	93	1,808,093	1,059,512	2,771,310	233,234	120,834	----	10
Cheshire	53	2,083,825	946 919	3,181,997	372,892	131,015	none	17½
Concord	35	1,485,000	none	1,412,576	329,744	158,632	8	83¼
Northern, N. H.	82	2,768,400	none	3,016,633	370,529	138,299	2½	41½
Conn't & Passumps. Riv.	61	1,048,145	787.608	1,780,062	162,687	55,173	none	----
Rutland & Burlington	120	2,233,376	2,662,396	5,378,428	394,971	--------	none	----
Vermont Central	117	5,000,000	3,550,236	8,463,366	820,119	214,793	none	----
Boston and Lowell	27	1,830,000	325,635	2,188,595	489,754	140,377	6	70
Boston and Maine	88	4,076,974	150,000	4,179,535	906,790	421,561	8	82¾
Berkshire	21	600,000	none	600,000	--------	42,000	7	----
Boston and N.Y. Central	74	2,234,600	1,200,000	3,310,948	102,352	42,335	none	3½
Boston and Providence	55	3,160,000	350,705	3,611,821	558,671	201.578	none	65
Boston and Worcester	68	4,500,000	655,428	4,865,439	1,008,004	404,461	6½	87¼
Connecticut River	52	1,591,110	254,043	1,802,244	277,770	102,942	4½	47
Eastern, Mass.	60	2,583,400	2,850.325	4,447,459	730,269	346,425	7	44
Essex	20	299,107	469,311	747,008	51,246	none	none	----
Fitchburg	67	3,540,000	334,992	3,730,965	704,638	272,716	6	71¾
Fitchb'g and Worcester	14	238.140	74.099	333,884	42,647	19,274	6	----
Lowell and Lawrence	12	200,000	140,000	363,658	56,135	23,823	6	----
Nashua and Lowell	14	600,000	16,000	654,603	191,887	55,877	8	80
N. Bedford and Taunton	21	500,000	none	533,953	198,491	56,533	6½	----
Old Col'y and Fall River	87	3,015,100	314,834	3,434,164	649,656	142,800	6	82½
Pittsfield & N'th Adams	18	450,000	none	443,677	50,895	25,519	6	----
Vermont and Mass.	77	2,232,540	1,046,626	3,207 867	275,523	56,383	none	11
Western, Mass.	155	5,150,000	5,689,520	9,953,258	1,763,944	718,703	7	90¼
Worcester and Nashua	46	1,141,000	218,244	1,394,703	209,118	82,959	2¼	45
Prov'nce and Worcester	43	1,522,200	351,500	1,843,332	316,616	131,312	7	70
Hartford and N. Haven	72	2,350,000	939,000	3,313,932	730,012	352,799	10	22
Hart'd, Prov. and Fishkill	123	1,845,610	2,090,124	4,060,869	258,685	119,611	none	----
Housatonic	110	2,000,000	474,177	2,429,066	330,792	18.351	none	----
Naugatuck	57	1,031,800	573,995	1,577,167	238,266	none	4	----
N. York and N. Haven	62	2,992,000	2,252,647	4,980,407	906,018	385,611	none	----
N. Haven and N. London	50	738,258	735,165	1,450,318	103,986	217	none	----
N. London, W. & Palmer	66	508,600	1,007,826	1,527,827	137,060	3,717	none	----
Norwich and Worcester	66	2,122,300	796,886	2,596,488	304,651	95,456	6	33
Buffalo, Corn. and N. Y.	100	1,482,766	1,402,244	2,597,963	123,147	50,752	none	----
Buffalo and N. Y. City	92	798,439	2,587,849	3,401,868	254,770	52,030	none	----
Buffalo and St. Line	81	1,300,000	1,030,000	2 343,849	507,618	264,855	10	----
Cayuga & Susquehanna	35	687,000	531,318	1,093,624	120,849	58,589	none	----
Hudson River	144	3,757,891	8,933,804	12,391,363	1,753,986	603,010	none	34½
Long Island	86	1,875,148	626,958	2,518,261	259,520	102,657	none	33
New York Central	534	24,154,860	14,462,742	28,523,913	6,563,581	3,162,126	8	92¼
New York and Erie	464	10,023,958	25,126,669	33,439,431	5,488,993	2,627,118	none	58
New York and Harlem	133	5,716,050	3,527,595	8,127,388	942,394	154,854	none	21½
Northern, N. Y.	119	1,611,527	4,522,413	5,435,565	518,527	145,733	none	2½
Oswego and Syracuse	37	374,920	219,594	677,754	106,764	53,380	none	----
Rensselaer & Saratoga	25	610,000	140,000	888,182	231,348	76,327	5	----
Saratoga and Washing'n	54	899,900	1,053,234	1,891,993	183,959	37,666	none	----
Syracuse & Bingham'n	71	731,614	1,118,751	1,636,117	Recently	opened.	none	----
Troy and Boston	27	439,492	493,500	1,107,873	152,648	66,407	none	----
Watertown and Rome	97	1,370,428	854,768	2,040,543	393,954	152.752	5	----
Belvidere and Delaware	50	1,000,000	1,177,376	2,177,376	124,301	44,825	none	----
Camden and Amboy	94	1,500,000	--------	4,763,184	1,682,486	552,456	12	----
Camden and Atlantic	60	240,125	1,269,223	1,499,185	69,673	61,760	none	----
New Jersey	31	3,253 925	798,596	4,306,338	824,032	440,447	10	23½
New Jersey Central	75	2 000,000	1,632,085	3,506,226	378.145	180,796	7	1----
Morris and Essex	62	1,155,715	351,500	1,549,622	233,596	99,377	6	----
Alleghany Valley	44	1,637,867	342,564	1,988,317	Recently	opened.	----	----
Cataw., Wil. & Erie	63	1,700,000	1,940,000	3,640,000	219,253	52,450	----	----
Cumberland Valley	56	1,099,500	12,211	1,191,833	146,381	66,994	----	----
Del. Lack. & Western	109	2,865,175	1,865,897	4,140,365	In progr.	--------	----	----
Erie and North East	20	600,000	150,000	750,000	--------	--------	10	----
Philad. & Sunbury	33	600,000	1,200,000	1,348,812	89 535	53,335	----	----
Little Schuylkill	28	2,660,100	546,222	3,407,651	353,301	255,930	9	----
Northern Penn.	19	2 530,855	731,492	3,287,678	--------	--------	----	----
Pennsylvania	256	12,355,525	7,519,096	18,483,489	3,533,333	1,829,277	6	90
Phil. and Reading	96	11,030,309	7,438,800	19,004,180	4,321,793	2,593,915	10	92
Phil. Wil. and Baltimore	98	5 000,000	3,069,723	7,452,062	1,006,638	353,573	3	42
Phil. Germ. & Norrist'n	38	899 350	376 800	1,274,150	206,981	113,443	9	----
Pittsb. and Connellsville	147	1,339,661	111,493	1,369,630	In progr.	--------	----	----
Sunbury and Erie	269	2,093,740	262,886	2,075,650	In progr.	--------	----	----
Baltimore and Ohio	382	13,118,902	10,809,659	22 218,849	3,711,453	1,601,090	none	52¾
Washington Branch	41	1,650,000	25,000	1,650,000	369,229	124,981	6	----
Northern Central, Md.	84	1,860,000	2,630,000	5,544,733	558,427	282,182	----	----
Manasses Gap	165	2,300,000	--------	In progr.	--------	--------	----	----
Orange and Alexandria	97	1,457,500	638,622	2,754,047	211,505	111,363	----	25
South Side	123	1,371,700	1,489,012	2,739,362	123,466	59,710	none	----
Pittsb'g & Steubenville	32	1,221,277	280,000	914,695	In progr.	--------	----	----
Virginia Central	138	2,800,666	1,051,248	4 184,516	379,366	172,391	none	----
Virginia and Tennessee	149	2,500,000	2,969,780	5,469,780	255,920	126,329	----	----
Richmond and Danville	127	2,000,000	1,200,000	3,200,000	316,309	144,662	----	----
Richmond & Peterab'g	22	685,600	272,086	1,060 495	139,438	47,003	none	----
Rich'd, Fred. & Potom'c	130	1,000 000	730,506	1,768,169	232,172	120,212	7	----
North Carolina	228	4,000,000	--------	4,235,000	Recently	opened.	----	----
Wilm'ton & Manchester	171	1,070.775	1,373,989	2,330,877	339,800	151.064	none	----
Raleigh and Gaston	97	973,300	120,573	1,135,451	173,923	103,392	2½	----
Blue Ridge	---	679,275	345,929	956,610	In progr.	--------	----	----
Charlotte and S. Carol.	109	1,201.000	380,000	1,719,045	291.219	138,875	6	----
Greenville & Columbia	165	1,293,464	968,800	1,999,080	214,865	206,774	----	----
South Carolina	203	4,188.020	2,731,545	7,133,848	1,585,991	883,402	9	----
Atlanta and La Grange	87	719,842	225,000	1,092,222	251,076	161,193	7½	----
Georgia	211	4,156,000	260,991	4,416,991	906,694	532,110	8	----
Georgia Central	191	3,833,140	none	3,833,140	1,280,570	645,774	9	----
Macon and Western	102	1,230 560	167,712	1,647,045	350,802	96,104	10	101½
Montgom'ry & W. Point	116	1,274,600	654,816	1,929,416	249,128	113,824	8	----
South Western, Ga.	92	1,097,496	465,500	1,624,920	253,306	141,168	8	----

NAME OF COMPANY.	Length of Road.	Capital paid in.	Debt.	Total cost of road & equip't.	Gross Earnings for last official year.	Net Earnings for do.	Dividend for do.	Price of Shares.
Tennessee and Alabama	30	246,486	--------	679,906	In progr.	--------	----	----
Tennessee and Missis.	---	170,931	--------	175,940	In progr.	--------	----	----
Memphis and Charlest'n	288	2,103,177	958,275	3,563,362	176,484	102,016	----	----
Mobile and Ohio	527	2,300,000	1,310,666	3,666,991	In progr.	--------	----	----
Miss. Central	188	642,534	none	628,303	In progr.	--------	----	----
N.O., Opelousas & G.W.	350	1,309,428	476,143	1,825,812	In progr.	--------	----	----
Vicksb., Shrevep. & Tex.	---	111,750	none	107,895	In progr.	--------	----	----
East Tennessee and Ga.	111	1,000,000	1,500,000	2,500,000	In progr.	--------	----	----
East Tennessee and Va.	16	625,425	938,593	1,033,781	In progr.	--------	----	----
Nash. and Chattanooga	151	2,319,330	1,497,081	3,843,694	316,090	112,177	none	----
Covington & Lexington	93	--------	--------	--------	264,973	--------	----	18
Lexington and Frankfort	29	431,091	159,299	635,363	90,930	34,864	----	----
Lexington & Big Sandy	----	--------	--------	428,057	In progr.	--------	----	----
Lexington and Danville	---	540,117	61,525	570,463	In progr.	--------	----	----
Louisville and Frankfort	65	698,236	669,061	1,589,566	244,014	96,902	6	----
Atlantic & Gt. Western	254	866,939	77,294	613,231	In progr.	--------	----	----
Bellefontaine and Ind.	118	1,881,598	1,260,612	2,805,821	238,010	114,592	none	30
Cleveland and Erie	95	--------	--------	--------	--------	--------	----	----
Clev., Col., and Cincin.	141	4,473,721	374,127	4,546,133	1,162,601	557,905	9	101¾
Clev., Zanesv., and Cincin.	87	--------	--------	--------	--------	--------	----	----
Cleveland and Toledo	200	2,675,425	2,689,301	5,124,629	736,272	396,986	10	78
Clev. and Mahoning	103	--------	--------	628,533	In progr.	--------	----	----
Clev. and Pittsburg	133	2,686,770	2,516,162	4,818,153	450,215	255,868	----	67
Cin., Hamilt'n & Dayton	60	2,100,000	1,464,364	2,961,978	483,620	--------	----	60
Cin., Wilm. & Zanesv'e.	131	1,120,450	1,131,265	2,326,459	In progr.	--------	----	20
Columbus and Xenia	55	1,484,550	149,000	1,481,733	356,366	187,518	10	85
Col. and Xenia	54	1,418,350	311,032	1,440,447	340,781	168,949	----	84
Dayton, Xen., & Belpre	63	437,838	422,658	860,496	In progr.	--------	----	----
Dayton and Michigan	140	1,076,602	393,011	1,185,826	In progr.	--------	----	----
Eaton and Hamilton	42	448,411	835,994	1,345,573	113,859	53,256	----	27
Little Miami	65	2,963,921	1,171,785	3,648,172	681,562	336,708	----	84½
Mad River and L. Erie	205	2,451,650	2,572,932	4,446,661	--------	--------	----	----
Central Ohio	138	1,520,927	3,485,076	4,283,443	Recently	opened.	none	----
Ohio and Penn.	187	2,451,700	3,219,000	5,670,700	1,111,626	662,117	9	65
Pittsb'g, Maysv'e & Cin.	50	--------	--------	343,882	In progr.	--------	----	----
Sand'y, Mansf. & New'k	127	1,350,000	2,206,357	3,552,357	328,958	164,479	none	----
Scioto & Hocking Valley	135	403,975	509,050	888,858	In progr.	--------	----	----
Springf., Mt. Vernon & P.	113	1,000,000	950,000	--------	In progr.	--------	----	----
Tol., Wabash & St. Louis	242	2,500,000	4,530,000	--------	In progr.	--------	----	----
Cin., Log, and Chicago	255	4,196,679	1,006,125	2,080,433	In progr.	--------	----	7
Evansv'e & Crawfordsv.	109	706,945	1,177,596	1,844,541	127,400	64,552	----	----
Ind. and Cincinnati	88	1,213,723	1,442,859	2,178,461	356,012	193,142	7	57
Indiana Central	66	611,400	1,261,179	1,907,911	350,176	134,375	----	48
Ind., Clev. & Pittsburg	83	834,157	1,101,971	1,671,544	--------	--------	none	20
Jeffersonville	66	1,014,252	694,000	--------	206,544	94,318	none	----
Lafayette and Indianapolis	64	--------	--------	--------	--------	--------	----	----
Madison and Indianapolis	87	1 647,500	1,589.881	3,237,381	--------	--------	none	----
New Albany and Salem	288	2,535,121	5,281,848	6,643,189	645,827	371,402	none	10
Peru and Indianapolis	73	--------	858.314	--------	150,000	90,000	none	15
Terre Haute and Ind.	73	974,800	604,355	1,502,166	287,512	189,702	10	95
Chicago and Rock Isl'd	182	3,141,500	2,387,155	5,214,152	In progr.	--------	----	95
Chicago and St. Louis	220	--------	--------	--------	1,077,312	--------	----	----
Chic., St. Paul & F'd du Lac	178	2,300,000	1,325.000	3,625,000	In progr.	--------	----	----
Galena and Chicago	298	4,334,800	1,189,304	5,866,263	1,506,710	942,231	17	112¾
Illinois Central	707	1,419,440	18,001,426	17,698.099	1,532,118	--------	----	97¾
Peoria and Oquawka	93	569,889	818,454	1,388,342	In progr.	--------	----	----
Ohio & Miss. (Wst. Div.)	147	1,780,295	3,292,403	4,870,586	Recently	opened.	----	----
Terre Haute and Alton	173	2,281,420	1,256,000	3,537,424	In progr.	--------	----	----
Detroit and Milwaukee	185	838,000	1,128,964	1,966,969	In progr.	--------	----	----
Mich. Central	282	6,021,916	6,142,023	10,300,147	2,215,283	879,656	----	93¾
Mich. South'n & N. Ind.	475	6,928,900	6,319,224	11,645,208	2,410,000	875,000	10	94
Green Bay, Mil. & Ch.	155	764,075	442,726	1,193,765	In progr.	--------	----	----
Milwaukee and Miss.	106	1,826 428	2,467,889	3,578,757	691,843	417,443	17	84½
Milwaukee & Watert'n	72	354,861	132,000	514,238	In progr.	--------	----	----
Milwaukee and Horicon	92	--------	--------	31,000	In progr.	--------	----	----
Milwaukee & La Crosse	69	--------	--------	--------	In progr.	--------	----	----
Racine and Miss.	47	921.906	380,715	1,289.321	In progr.	--------	----	----
Hannibal & St. Josephs	---	292,351	580,000	823,310	In progr.	--------	----	----
North Missouri	13	1,138,208	684,294	1,093,336	In progr.	--------	----	----
Pacific	130	2,803,692	3,903,174	6,463,726	160,000	In progr.	----	----
St. Louis and Iron Mt.	---	445,170	--------	186,115	In progr.	--------	----	----
Panama	49	3,743,000	--------	6,564,852	628,850	416,756	9½	104

U. S. GOVERNMENT SECURITIES.

	OFF'D. Per ct.	ASKED Per ct		OFF'D. Per ct.	ASKED. Per ct.
Loan, 6 per ct. ..1856	103	-----	Loan, 6 per ct. ..1868	117	-----
Do. 6 do. ..1862	111	-----	Do. 6 do. coup's ..1868	117	-----
Do. 6 do. ..1867	117	-----	Do. 5 do. Tex. ind. ..1866	106⅞	-----

STATE SECURITIES.

Maine, 6 per ct. ..1870	101	104	Indiana, Can. Loan, 6 per ct.	----	-----
Massachusetts, 5 per ct. 1859	99	100	Do. do. pref. 5 do.	----	20
Do. 5 stg.	100	101	Kentucky, 6 per ct. cp. 1869-72	100¾	102
New York, 6 per ct. 1860-62	107	109	Louisiana, 6 do. cp. long	90	90½
Do. 6 do. 1864-65	112	-----	Maryland, 5 do cp. 1870-90	104	106
Do. 6 do. 1866-67	114	-----	Do. 5 do. cp.	----	-----
Do. 6 do. 1872-73	117	119	Missouri, 6 do. cp. ..1872	86¼	86½
Do. 5½ do. 1860-61	104½	105	N. Carolina, 6 do. cp. ..1873	97½	99
Do. 5½ do. ..1865	104½	-----	Ohio, 6 do. ..1856	100	100½
Do. 5 do. 1858-60	102	-----	Do. 6 do. ..1860	103	103¾
Do. 5 do. ..1866	104	106	Do. 6 do. ..1870	107	108
Do. 4½ do. 1858 59-64	----	100	Do. 6 do. ..1875	110	----
Alabama, 5 do. coup.	----	-----	Do. 5 do. ..1865	----	-----
California, 7 do. coup. 1870	90	90¼	Penna., 5 do.	84¾	85
Georgia, 6 do. do. ..1872	100	-----	Do. 5 do. cp. ..1877	88	89
Illinois Int. Imp. 6 per ct. 1847	110	----	Tenness. 5 do. cp.	----	80
Do. do. 6 do. Int'est	70	75	Do. 6 do. cp.	95	96
Indiana, 5 do.	84	84¼	Virginia, 6 do. cp. ..1866	95	95¼
Do. 2¼ do.	56	57			

Railroad Bonds.

The following quotations are ex-interest.

NAMES OF COMPANIES.	Amount of Loan.	Description of Bonds.	Rate Int.	Interest payable.	Where payable.	Due.	Offered.	Asked.
Alabama and Tennessee River	$838,000	1st mortgage, convertible	7	1st Jan. 1st July	N.Y.	1872	-----	85
Buffalo and State Line	500,000	Do. inconvertible	7	April, October.	"	1866	----	----
Bellefontaine and Indiana	600,000	Do. convertible	7	Jan'y, July	"	1866	90	95
Do. do.	200,000	Real estate, convertible	7	Jan'y, July	"	1858	90	92½
Do. do.	200,000	Income, guar. Cl. Col. & Cin.	7	Feb'y, August.	"	1859	87½	90
Central Ohio	1,250,000	1st mort. conv. east. sec.	7	Divers	"	1861-64	----	77
Do.	800,000	2d do. inconvertible	7	March, Sept.	"	1865	----	75
Cincinnati, Hamilton, and Dayton	500,000	1st mortgage inconvertible	7	20.Jan. 20.July	"	1867	----	93
Do. do. do.	465,000	2d do. do.	7	May, Novemb.	"	1880	80	83
Cincinnati and Marietta	2,500,000	1st mortgage, conv. till 1862	7	Jan'y, July	"	1868	75	80
Cincinnati, Wilmington, and Zanesville	1,300,000	Do. convertible	7	May, Novemb.	"	1862	----	90
Cleveland, Painesville, and Ashtabula	567,000	Do. inconvertible	7	Feb'y, August.	"	1861	90	92½
Cleveland and Pittsburgh	800,000	Do. convertible	7	Feb'y, August.	"	1860	----	93
Do. do.	1,200,000	Do. on Branches	7	March, Sept.	"	1873	75	85
Cleveland and Toledo	525,000	Do. inconvertible	7	Feb'y, August.	"	1863	86½	89
Chicago and Mississippi	800,000	Do. conv. till 1857	7	April, October.	"	1862-72	----	86
Do. do.	1,200,000	Do. inconvertible	7	April, October.	"	1862-72	----	86
Covington and Lexington	400,000	Do. do	6	April, October.	"	1862	73	76
Do. do.	1,000,000	2d mortgage, convertible	7	March, Sept.	"	1883	----	65
Delaware, Lackawanna, and Western	1,500,000	1st mortgage, do.	7	April, October.	"	1875	90	91
Fort Wayne and Chicago	1,250,000	Do. conv. till 1863	7	Jan'y, July	"	1873	80	82½
Galena and Chicago	2,000,000	Do. inconvertible	7	Feb'y, August.	"	1863	99	100
Do. do.	2,000,000	2d mortgage, do.	7	May, Novemb.	"	1875	90	91
Great Western (Illinois)	1,000,000	1st mortgage, do.	10	April, October.	"	1868	86	90
Green Bay, Milwaukee, and Chicago	400,000	Do. convertible	8	10.April, 10.Oc.	"	1863	93	94
Jeffersonville	300,000	Do. 2d sec. inconv.	7	April, October.	"	1873	----	75
Indiana Central	600,000	Do. convertible	7	May, Novemb.	"	1866	----	90
Indianapolis and Bellefontaine	450,000	Do. do.	7	Jan'y, July	"	1860-61	----	92
Indianap. & Cin'ti (for Lawb. & U. M.)	500,000	Do. conv. till 1857	7	March, Sept.	"	1866	----	92
La Crosse and Milwaukee	950,000	1st mort. 1st sec. conv. till 1864	8	May, Novemb.	"	1874	75	85
Lake Erie, Wabash, and St. Louis	3,400,000	1st mortgage, conv. till 1859	7	Feb'y, August.	"	1865	76½	78
Little Miami	1,500,000	Do. inconvert.	6	2. May, 2. Nov.	"	1883	79	80
Michigan Central	1,000,000	No mortgage, convertible	8	April, October.	Bost.	1860	99	100½
Do.	600,000	Do. do.	8	March, Sept.	"	1869	100	101
Milwaukee and Mississippi	600,000	1st mort. 1st sec. conv. till 1857	8	Jan'y, July	N.Y.	1862	96	97
Do. do.	650,000	Do. 2d do. 1858	8	April, October.	"	1863	94¼	95
Do. do.	1,250,000	Do. 3d do. 1860	8	June, Decemb.	"	1877	90½	91
New Albany and Salem	500,000	Do. 1st section	10	April, October.	"	1858-62	-----	101
Do. do.	2,325,000	Do. oth. sec. con. till 1858	8	May, Novemb.	"	1864-75	-----	80
Northern Cross	1,200,000	1st mortgage, convertible	8	Jan'y, July	"	1873	94	95
Ohio and Indiana	1,000,000	Do. do.	7	Feb'y, August.	"	1867	----	90
Ohio and Pennsylvania	1,750,000	Do. do.	7	Jan'y, July	"	1865-66	92	95
Do. do.	2,000,000	Income, convertible	7	April, October.	"	1872	80	82½
Pennsylvania (Central)	5,000,000	1st mortgage, conv. till 1860	6	Jan'y, July	Phila.	1880	93	95
Scioto and Hocking Valley	300,000	Do. 1st sec. conv	7	May, Novemb.	N.Y.	1861	-----	83½
Steubenville and Indiana	1,500,000	Do. convertible	7	Jan'y, July	"	1865	-----	78
Terre Haute and Indianapolis	600,000	Do. do.	7	March, Sept.	"	1866	-----	----
Terre Haute and Alton	1,000,000	Do. do.	7	Feb'y, August.	"	1862'772	79½	80½
Do. do.	2,000,000	2d do. do.	8	Feb'y, August.	"	1870	79	80

The following quotations include the accrued interest.

NAMES OF COMPANIES.	Amount of Loan.	Description of Bonds.	Rate Int.	Interest payable.	Where payable.	Due.	Offered.	Asked
Baltimore and Ohio	2,500,000	Mortgage	6	April, October	Balt.	1885	84½	85
Do. do.	1,128,500	Do.	6	Jan'y, July	Balt.	1875	87	88
Chicago and Rock Island	2,000,000	1st mortgage, conv. till 1858	7	10.Jan. 10.July	N.Y.	1870	92	93
Erie Railroad	3,000,000	1st mortgage	7	May. Novemb.	"	1867	107½	109
Do.	4,000,000	2d mortgage, convertible	7	March, Sept.	"	1859	96	98
Do.	6,000,000	3d mortgage	7	March, Sept.	"	1883	94	94½
Do.	4,000,000	Not conv. Sink. Fund, $420,000	7	Feb'y, August.	"	1875	90	90¾
Do.	4,351,000	Convertible, Inscription	7	Feb'y, August.	"	1871	84½	84¾
Do.	3,500,000	Convertible	7	Jan'y, July	"	1862	86	89
Hudson River	4,000,000	1st mortgage, Inscription	7	Feb'y, August.	"	1869-70	99½	100
Do.	2,000,000	2d do. do.	7	16.June, 16.Dec	"	1860	86	87
Do.	3,000,000	3d do. convertible	7	May, Novemb.	"	1870	69	69½
Illinois Central	17,000,000	Mortgage, inconvertible	7	April, October.	"	1875	88¼	88¾
Do. (Free Land)	3,000,000	M'ge 345,000 acrs–priv. 7 shar's	7	March, Sept.	"	1860	87½	88¾
Michigan Southern	1,000,000	1st mortgage, inconvertible	7	May, Novemb.	"	1860	92	95
New York and Harlem	1,800,000	Do. do.	7	May, Novemb.	"	1861-72	86½	87
New York and New Haven	750,000	No mortgage, do.	7	June, Decemb.	"	1855'60'6	----	----
New Haven and Hartford	1,000,000	1st mortgage, do.	6	Jan'y, July	"	1873	-----	97½
Northern Indiana	1,000,000	Do. do.	7	Feb'y, August.	"	1861	92	----
Do. Goshen Branch	1,500,000	Do. do.	7	Feb'y, August.	"	1868	84½	85
New York Central	8,287,000	No mortgage, do.	6	May, Novemb.	"	1883	88¾	89
Do. do.	3,000,000	No m'ge conv. from June 57-59	7	15.June, 15.Dec	"	1864	102	102½
Panama, 1st issue	900,000	Convertible till 1856	7	Jan'y, July	"	1866	104	106
Do. 2d do.	1,478,000	Do. till 1858	7	Jan'y, July	"	1866	104	106
Reading, issued 1843	1,573,000	Mortgage, inconvertible	6	Jan'y, July	Phila.	1860	----	----
Do. do. 1844, '48, '49	1,300,000	Do. convertible	6	Jan'y, July	"	1860	93	94
Do. do. 1849	3,469,000	Do. inconvertible	6	April, October.	"	1870	87	88½

CITY SECURITIES.	Int'st payable.	Off'd p. ct	Askd p. ct.	CITY SECURITIES.	Int'st payable.	Off'd p. ct.	Askd p. ct.
New York. 7 per ct.-----1857	Feb'y, May,	100	-----	Milwaukee, 7 per ct. coup.---- X	Divers -------	87	90
Do. 5 do. ----1858-'60	August and	97	98	New Orleans, 6 per ct. cp. R.R. X	Do. -------	----	73
Do. 5 do. ----1870-'75	November--	97	98	Philadelphia, 6 per ct.---1876-'98	Jan'y, July---	92½	93
Albany, 6 per ct. coup.-1871-'81 X	Feb'y, August.	96	98	Pittsburgh, 6 per ct. coup.------ X	Divers -------	76½	78
Alleghany, 6 per ct. coup. ------X	Jan'y, July ---	----	----	Quincy, 8 per ct. coup.----1868 X	Jan'y, July---	----	94
Baltimore, 6 per ct.----1879-'90	Quarterly-----	97½	98½	Racine, 7 per ct. coup. ----1873 X	10. Feb'y, Aug.	81	84
Boston, 5 per ct. coup.----------X	April October.	99	100	St. Louis, 6 per ct. coup.---Long X	Divers -------	79	80
Brooklyn, 6 per ct. coup.--Long X	Jan'y, July---	----	101	Do. do. Municipal.-- X	Do. -------	79½	80½
Clev'l'd, 7 per ct. cp. W. W. 1879 X	Do. do. ---	101	102	Sacramento, 10 p.ct. cp. 1862-'74 X	Do. -------	79½	80½
Cincinnati, 6 per ct. coup. ------X	Divers -------	89½	90	S. Fr'cisco, 7p.c.cp. 1865, pay. N.Y. X	May, Novemb.	-----	82
Chicago, 6 per ct. coup.--1873-'77 X	Jan'y, July---	89	90½	Do. 10 p. ct. cp. -----1871 X	Do. do.	95	97
Detroit, 7 per ct. cp. W W. 1873-'78 X	Feb'y, August.	101½	102	Do. 10 do. pay. N. Y.--- X	Jan'y, July----	103	105
Louisville, 6 per ct. cp.--1880-'83 X	Divers -------	78½	80	Wheeling, 6 per ct. coup.------ X	Divers -------	----	67¼
Memphis, 6 per ct coup.--1882 X	Jan'y, July---	65	70	Zanesville, 7 do. ------ X	April. October	-----	97¼

Cincinnati Stock Sales,

By KIRK & CHEEVER.

For the week ending February 26th, 1856.

BONDS.

	Per ct.
Hillsboro' and Cin., 7 per ct. 1st Mort.	50
Marietta & Cincinnati, 7 per cent. 1st Mort.	70
Indianap. & Cin., 2nd Mort. 7 per ct.	76
Cin., Wil. & Zanes. 2d Mort. 7 per ct.	60
Covington & Lexington, 2nd Mort. 7 per ct.	65
Ohio & Mississippi, 2nd Mort. 7 per ct.	42
Covington & Lexington, 10 per ct Income	60
Little Miami, 6 per ct. Mort.	79
Cin., Ham. and Dayton, 2nd Mort. 7 per ct.	87

STOCKS.

Cin., Wilm. and Zanesv., 18.—Cin., Ham. and Dayton, 68.—Col. & Xenia, 83 —Cincinn. & Chic., 7⅛.—Central Ohio, 16.—Covington and Lexington, 18.—Dayton and Western, 20.—Eaton and Hamilton, 27.—Fort Wayne and Southern, 10.—Indiana Central, 48.—Indianapolis and Cincinnati, 57.—Little Miami, 90.—Mad River and Lake Erie, 18.—Marietta and Cin., 17 —Ohio and Mississippi, 5¾.—Hillsboro' and Cincinnati, 17.—Junction (Indiana), 10.—Peru and Indianapolis, 15.

By HEWSON & HOLMES.

For the week ending February 27th, 1856.

BONDS.

$5,000 Coving. & Lex., 6 per ct. Income	41	
2,000 Coving & Lex., 7 per ct. 2nd Mortgage	65	"
1,000 Little Miami, 6 per ct., due in 1883	80	"
5,000 City of Maysville, 6 per ct., issued to Maysville and Lexington R. R.	21	"
1,250 Scioto and Hock'g Valley, 7 per ct. Dom'tic issued to same road	16	"
2,000 Col. Piqua & Ind., 7 per ct. Dom'st	8	
500 " " " " "	7¾	"
2,000 Ohio & Miss. 7 per ct. 2nd Mort.	42½	"
1,000 Cin., Wilm. & Zanesv., 7 per ct. Income	45	"
4,000 Cin. and Chic., 8 per ct. Real Estate, George Milne, Trustee, due in 1859	30	"
225 Little Miami, Dividend Scrip, new	80	

STOCKS.

144	Shares Ohio & Mississippi	5½	"
100	" " " (30 days)	6	"
50	" Little Miami	90	
27	" " "	91	
30	" Central Ohio	20	
172	" Covington & Lexington	18	"
200	" Cin. & Chicago	7¼	"
126	" Terre Haute and Richmond	95	
20	" Indianapolis and Cincinnati	57	
113	" Columbus & Xenia	86	
60	" Peru and Indianapolis	15	

Extract from the Circular of Robt. Benson & Co., per America.

LONDON, Feb. 15th, 1856.

No new circumstances of moment bearing upon the Russian question has transpired during the week. The Plenipotentiaries have not yet all assembled at Paris. The prevailing opinion still continues to be, that the conference will end in the establishment of peace. On the other hand, the dispute between our Government and that of the United States, has latterly obtruded itself more upon public attention from the apparent unwillingness of the latter Government to facilitate a solution of the question.

The undue magnifying by political parties in the United States of one question of such minor importance, and the disinclination to terminate an altercation about a grievance which has ceased to exist, have given rise to feelings of some irritation on this side. The discussions of these parties in Congress would undoubtedly have had considerable effect in checking the demand for American securities on this side, were it not for the confident belief entertained here, that they do not truly represent the feelings of the American people, and had the declarations of our own Government been of a less candid and pacific character.

Consols, which were quoted in our last circular at 91⅛a¼ for money, and 91⅝a¾ for the acc't, have gradually but steadily improved up to yesterday forenoon, when they reached 92 for money, and 92½ for the account. In the early part of this forenoon there was a rapid decline of about 1¾ per cent., on a rumor having become current of the intention of the Government to fund a portion of the floating debt; since which it has been announced by the Chancellor of the Exchequer, that the Government will be prepared to state on the 18th current, the amount and terms of a new loan, and the conditions on which they are prepared to fund a portion of the outstanding Exchequer bills. The new loan is generally expected to be for £15,000,000.

During the week, money has continued in active demand, and in the Stock Exchange, yesterday, very high rates were paid for continuation of loans, even on Government securities. The last publish-

ed returns of the Bank of England, showed an increase of £359,773 in the stock of bullion. The future returns are expected to be of a favorable character.

Transactions in American securities have been chiefly confined to certain State stocks, and such Railroad bonds as have obtained a ready currency. Of the latter, we quote Pennsylvania 1st mort'ge at 87½; the 2d mortgage sterling bonds have been sold at 91 per cent., and the Dollar bonds at 75 per cent. Illinois Central Construction bonds have changed at 79½ and 80; and the six per cts. at 75. The Freeland bonds are very firm at 84*a* 85 per cent; the shares of this company may be quoted at 3 to 1 discount.

We have not much change to notice in the price of State stocks. There has been a forced sale of Maryland sterling bonds at 85, and 86 is now asked for them. There has been some enquiry for Tennessee at 84 per cent; Virginia 6 per cents at 86; and the sterling 5 per cent. bonds at 84. So. Carolina bonds of long dates are freely offered at current prices, but those of 1858 are in request at par. ROBT. BENSON & CO.

Marie & Kanz' Money Circular for the European Steamer of the 5th inst.

[TRANSLATED EXTRACT.]

New York, March 4, 1855.

Since our advices of 25th ult., the stock market has been held in check by the rumors circulated on the enlistment difficulties now occupying the British and American Governments. Business, in consequence, has been restricted, and quotations unsteady. Since the official correspondence has been made public, more confident feeling has prevailed, but thus far without giving more life to the stock market. Money continues abundant, and the export of coin unimportant. On the 1st of June, the United States Government will pay out the $7,750,000 reserved for the Texas creditors.—The steamer America, whose mails were delivered last night, brought out considerable orders for American stocks. The news per Baltic, received this day, has produced but little impression on the market. State stocks have been dull, with a slight decline. Illinois Internal Improvement, of 1847, in demand at 110. City and County bonds are in active and increasing demand, both for home and foreign account. By the America and Baltic the orders in these have been quite important. St. Louis City has been active at former quotations. Milwaukee have been more largely dealt in than for some time past, with a further rise of 3 per ct. San Francisco 10 per cents are wanted, but the supply is limited. Some County bonds of Kent'ky have been dealt in, without change of prices. R. R. bonds are generally higher, but not active; Erie, 1883, ⅛ per cent. higher; Hudson 3d mort'ge 1¼; Illinois Central, 1; Freeland, 1; New York Central 6 per cent., 1¼. In bonds not quoted at the Stock Exchange we note some sales of Galena and Chicago 2d mortgage, Delaware, Lackawanna and Western 1st mortgage, and Terre Haute and Alton 1st mortgage. Railroad shares are generally firmer, without much speculation, except in Cleveland and Toledo, and Reading. Exchanges are firm, with a small supply. Transactions not large; Sterling, after selling as high as 109⅜, closes at 109½; Francs, 5.17½.

MARIE & KANZ.

Muscogee Railroad.

It will be seen, says the Columbus *Sun*, by their advertisement in another column, that the Muscogee Railroad Company have declared a dividend of 4 per cent., payable the 1st of March next. This road has been doing a profitable business for the last six months, as will be seen by the following statement:—

Gross earnings for the six months, ending Jan'y 1, 1856	$104,900 73
Expenses	46,489 11
Net profits	$58,411 62

This road extends east from Columbus, Ga., some 50 miles, and there connects with an arm of the *South-western* railroad running to Macon. These earnings are quite large for a road of 50 miles, as new as the *Muscogee* and through so poor a country; but they will be very much larger in a short time. The position of the road is a good one for a large through business.

American Railroad Journal.

Saturday, March 8, 1856.

To Correspondents.

"M" of Georgetown, D. C. will find a letter in the Post Office containing a solution of his question.

We are always glad to hear from our friends. But unless their diagrams are accompanied by wood-cuts they cannot be illustrated. And when an answer by mail is called for courtesy appears to have established the principle that the writer's name should be signed.

Strength of Compound Beams.

A "Young man" must be destitute not only of personal experience in building, but of a habit of careful thought when he says what follows.

"Many excellent Engineers and practical Mechanics think the oftener a beam is sawed through (lengthwise) the stronger it becomes. The height being the same, they tell me, it is putting them apart with blocks between them, which gives the strength. Now how far apart should they be? Perhaps the closer the better, and if so, why not let them touch, and if so, how can their being in one solid piece weaken them?"

"*Young Man.*"

The custom of building compound beams for the Chords and Arch Braces of Bridges and for various other positions where not only great strength but durability is required and where truss combinations are to be made, has so long obtained, and is evidently so superior to the primitive mode of laying down a single huge stick of timber, that it seems almost unnecessary to enumerate the reasons that have led to its adoption. Nevertheless, that the younger members of the profession may understand that while there is no magical *hocus pocus*, not even an apparent paradox in the actual practice of builders, we state briefly the philosophy of the principle.

But first, it is a mistake to suppose that any Engineer claims that timber is strengthened by sawing it open and then simply closing it together with tree-nails or bolts. No Engineer or Mechanic, no matter how illiterate he may be, ever uttered such a thought. Suppose the case; a stick of timber of any length or depth and say 12 inches wide is sawed into 6 planks of equal thickness—each plank will be lest than two inches thick, the waste depending on the gauge of the saw plate which is governed by the depth of the stick. Let us suppose each plank to be 1⅞ inches thick. Now close the beam, and we have a stick of timber 11¼ inches wide instead of 12 inches. Of course, no mechanic ever supposed such a piece as strong as the original.

But let us see how the builder proceeds in fact, and then we may understand his reasons for the mode he adopts.

Compound beams are of various sorts. The simplest is the *solid built beam*. It is thus constructed:—Planks of the requisite depth and thickness but without regard to length are selected. The imperfections, such as knots, shakes, spots of dry root, &c., are cut out and the planks are then laid, the ends abutting together so as to make up the required length, and side by side to make the required thickness, care being taken to break joints with adjacent courses and to *lay the grain in opposite directions.* Tree-nail, spike, or strap. The beam is correctly made and the reason is obvious. In the first place, it is *sound* as to quality. It was impossible to procure a stick of clear timber of the size demanded, for anything like a reasonable amount of cost, whether it be labor of search, or money, and so, secondly, the beam is the most economical, the cheapest as to cost. Thirdly, the beam is stronger than a simple stick, if it has been properly constructed. And this point we proceed to illustrate, premising however, that we are uttering no empiricism, but that the fact is so well established by every Engineer's experience as to require no demonstration. Of course, the superior soundness of the beam is an element of strength, but we wish now to consider only the effects of laying the grain in opposite directions.

Draw a straight chalk line across the floor.—Prepare a number of pieces of inch stuff two feet long by three inches wide, lay them down flat upon the floor and let their edges incline to the right making an angle of 45° with the chalk line to which set one corner of each piece; lay the pieces close together across the floor. Then on these, lay similar pieces inclining to the left and making the same angle, 45° with the chalk line—the second series will be at right angles to the first. Now nail the upper layer strongly upon the lower, letting the separate pieces represent the grain of two boards; you have a combination illustrating the effect of placing one plank against another with the grain in opposite directions. You form indeed a system of lattice bracing.

If this beam be entirely constructed of the same stick of timber, as is frequently the case, you have still an advantage besides crossing the grains. By splitting and turning each alternate plank, end for end, you disperse the defects and splice by the weak points with sound timber, as it is hardly possible that two unsound spots should come together on adjacent planks. Moreover, if the middle of the wood be shaky, the openings are bound as with cleats.

It is very customary to construct wooden arches in this way, but for another reason which is, simply, that with plank of usual widths a comparatively short segment only can be secured with the given radius.

We have known arches built without compounding the segments. The Burr Bridge is the common structure for highways in Pennsylvania and wherever the single arch to the truss is in use, it will be found to be simply spliced at the ends of the segments; or more commonly, one factor of the arch abuts squarely against its neighbor without a splice and is kept in place by its combination with the posts and braces of the truss.

The finest timber in the country will be found in the noble bridge built by the Cheshire Railroad Company over the Connecticut river at Bellows Falls, by the CAMPBELLS. It is an improved Burr double track—span 175 feet. The contractors bought timber land up the river and culled the material for the structure from a large forest. Nothing can surpass the beauty of the pine of which that bridge is constructed.

Each truss is embraced between two arches, simple beams—short segments of course, but abutting to each other with square joints. Some of the posts are enormous, measuring when dressed and framed, 18×21 inches. This, however, is a rare case; it is seldom such material is found for our bridges.

Sometimes *solid built beams* for arches are differently arranged. In the plan mentioned, the plank occupies a position that brings its width into a vertical plane, the edges forming the Extrados and Intrados of the Arch, and these curves are sawed on the plank. But frequently it is laid upon one side and bent transversely to its thickness to correspond with the required curvature. Several layers are made use of and the whole butted together or more often strapped with iron bands that compass the entire cluster forming the arch.

This method is common on bridges of long span. It is easy to see that with less weight a greater degree of strength is secured. For the fibres being curved to the line of the arch receive the compression resulting from the load in the direction of their length, which is unbroken, and transmits the effect from end to end. Whereas, in the other mode the curve being sawed out, the inner and outer fibres are cut off, and we have to depend on their lateral adhesion for transmitting the pressure communicated to them.

An example of this form of beam is seen in the famous design of JULIUS W. ADAMS, the Cascade Bridge of 275 ft. span on the Erie railroad, the largest single span of wood in the world.

Another illustration is afforded in the Market street Bridge over the Schuylkill in Philadelphia.

The bridge over the Lackawaxen river and Delaware and Hudson Canal on the Erie railroad presents a most striking illustratien of each different sort of compound beam.

We have considered the solid built beam. It is sometimes customary to separate the parts forming the chords of bridges by blocks or keys. There are many reasons for this. Lateral strength is gained by increasing the width of the stick supposing it properly braced and bolted. And this lateral stiffness is an important item in all bridges, whether we consider the effect of the wind or the wabbliug motion of trains.

Another reason for spreading the chord timbers is to get bearing surface for the braces and a solid stick of necessary width would be heavier than required and therefore poor economy.

Again, this arrangement allows a more perfect ventilation of the timber, the mass being kept in a more uniform situation as to the atmosphere and its changes.

Facility of repair constitutes another argument in favor of this method of construction. If dry rot enter one stick it does not necessarily attack and destroy the whole chord. The offending member is easily taken out and replaced while the structure is undisturbed..

The practice of leaving spaces between the component parts of the chord, allows placing the vertical rods and bolts without cutting away the timber, while the insertion of keys produces a uniformity in the lateral distribution of the woight, since aided by bolts they form the means of communication between the different pieces transmitting pressure from one to the other.

Other reasons present themseives, but the subject being so simple, it seems unnecessary to spend more time in its discussion.

New Car Factory at Harrisburg, Penn.

A Company has been organized in Pennsylvania for the Manufacture of Railroad Cars of all sorts.

They start under circumstances to a degree favorable. Having the experience of past days to govern them—having the advantage of all the improvements that have been made in Machinery, it is impossible they should not be able to furnish work of a superior character, and at as cheap a cost as other companies. Their works are extensive—located in the midst of the Iron, Coal, and Lumber region of the State—with a large stock of well seasoned lumber on hand—an Eastern Superintendent, *thoroughly* experienced in every department of the business—so that their facilities are very superior.

We recommend Mr. WM. T. HILDRUP, the Superintendent, to the notice of Companies wishing Cars—or Wheels.

NOTICE TO

Civil and Mechanical Engineers, Land Surveyors, Architects, and Draughtsmen.

We are preparing a Register of the names of these gentlemen to be kept in this office for the benefit of our correspondents and friends.

This Register will at all times be open to the inspection of parties calling here and will be an assistance to us in answering the many calls for information concerning these gentlemen that we receive.

Please send us your names and addresses and the same of all others whom you know,—*if you have time.* At any rate send your own names.

Description of Engineers' Instruments,— 80 pp. 12mo. GRATIS.

We have just received from the Messrs. GURLEY of Troy, a book of 80 pages describing in detail the instruments and appliances for Field Work, constructed at their extensive manufactory in Troy.

The book is a good thing. With this before him, the Engineer has a description of each instrument to aid him in making selections or, if he prefer to employ another manufacturer, he has an excellent guide for his specifications.

The book contains the simplest rules for adjusting instruments, and will on this account be valuable to every young assistant.

It gives the method of using each instrument, and of the most minute adjustments, with instructions to assist the Engineer in making his own repairs,—as for instance, replacing the cross-wires, centering the eye-piece, replacing the compass glass, the levels; lacqering, re-magnetizing the needle, to turn off the variation of the needle, to ascertain the magnifying power of the instrument. The book is illustrated with correct engravings of the most important subjects. We advise our friends to send for it. The cost is nothing. Mr. GURLEY thinks it a good way to advertise. But whether you want an instrument or not you can have this in your pocket for the trouble of sending for it and will find it of use.

During the last year when business was the dullest, the Messrs. GURLEY kept twenty-five men employed in the department of railroad instruments.

They have lately remodeled many of their patterns and will furnish only the newest, unless otherwise ordered. The enterprize of these gentlemen is commendable. When they have improved their patterns, they do not retain for sale the old pieces, but cast them away entirely, so that every customer is served of the latest.

We give in a short extract a simple rule.

"It may sometimes happen that the needle has lost its polarity, and needs to be re-magnetized; this is effected in the following manner:

The operator being provided with an ordinary permanent magnet,* and holding it before him, should pass with a gentle pressure each end of the needle from centre to extremity over the magnetic pole, describing before each pass a circle of about six inches radius, to which the surface of the pole is tangent, drawing the needle towards him, and taking care that the north and south ends, are applied to the corresponding poles of the magnet.

Should the needle be returned in a path near the magnetic pole, the current induced by the contact of the needle and magnet in the pass above described, would be reversed, and thus the magnetic virtue almost entirely neutralized at each operation.

When the needle has been passed about twenty-five times in succession, in the manner above described, it may be considered as fully charged."

Send for the book at once!

☞ We wish to call the attention of the Engineer, and indeed of all practical men of common sense, to the following article on "Wind as a Motive Power"—by Dr. Johnson.

It is indeed strange, that while the entire mechanical genius of the age is devoted most untiringly to economizing labor and the power that saves labor, as well as the materials for furnishing that power and arranging its application, we have yet permitted a power that is almost constantly on hand—costing nothing but that we stretch forth and take possession of what it offers—that we permit a mighty power, free as the winds, to sport about us and flee away unused—wasted.

This is the economy of the 19th century—an economy that needs reforming.

Wind as a Motive Power.

BY FRANK G. JOHNSON, M. D.

It must be evident to all that the wind is one of the most powerful physical forces in nature; blowing everywhere, at all seasons, and for everybody. Its unlimited capacity and usefulness as a motive power, is demonstrated in its application to the propulsion of vessels. It makes the huge and heavy burdened ship to "walk the sea like a thing of life," driving the noble clipper from wave to wave with a velocity that outstrips the steamer, and wafts innumerable burdens from port to port, over seas and oceans, which all the spare capital of the world could not drag along with the power of steam.

It is evident, too, that the power of the wind is as great and universal on the land as on the water; and the reason why it has not been more generally used as a motive power on land, is because the facilities of appliance have not been so great on land as on sea. Consider the forests of masts, pullies and spars, the thickets of shrouds and halliards, cordage and ropes, that surround every sea-port city of the world; besides the uncounted crafts that are scattered over every sea, lake and ocean, holding out on their long giant arms a mil-

* A magnet suitable for this purpose costs from 12 to 25 cts.

lion broad-spread sails—myriads of yards of canvas—and all to reap the advantages of that power, universal and mighty, that makes the ocean roar, piles up the endless water-hills and tumbles them over the sea. Yet, on land, an instrument, apparatus or machine—Windmill—designed to reap profit and advantage from the same power, is met with so rarely, save in few countries, that it is looked upon as a curiosity.

It not being important for vessels to move with uniformity of speed, alternately strong and light winds will answer the purpose on water as well as an even wind; and this is the reason why the wind has been so much more readily adapted to their propulsion; whereas, it is usually necessary that machinery be moved with uniform velocity. Now as the velocity of the wind is so variable, and its force much more so—being as the square of its velocity—it is not reasonable to expect it would be very readily applied to machinery, as some apparatus must first be devised to obviate this objection, which has not, hitherto, been very effectually accomplished. Even without such an apparatus, however, the wind has been quite successfully applied to the working of machinery; sufficiently so, at least, to demonstrate the practicability of working a Windmill, as a first mover, so far as to give it a more prominent place among the motive powers than it now occupies. But when we consider that, from earliest times, wind has been successfully made use of in navigation; and when we consider, too, the present advanced state of the mechanic arts in general, together with the great, and ever-increasing demand that has always existed for some cheap, simple, and universal motive power, it seems strange that the facilities for adapting and applying the wind as a stationary motive power on land, should be deficient—so inferior to the means for applying it as a locomotive power on the seas.

Whatever may be the true account of their origin, it is well known, that windmills were most numerous and flourishing about a century ago; being more common in the Netherlands and Holland,—as also they now are—than any other part of the world. About this time they were quite extensively used,and attracted considerable attention of scientific men. Among others,who made similar examinations, Nicholson, in his "Operative Mechanics," states that M. Colomb, (Mem. de l'Acad. Roy., 1781,) made a practical and scientific examination of fifty windmills, all in the neighborhood of Lisle; each of which he found to be about sixty feet in diameter, having four arms and fans, the fans being rectangular, and six feet wide; the shaft and arms, where they entered the shaft, being from four to six feet in diameter. The lattice work in each fan would cost as much as a whole mill, of fair size, in these times. Every other part of the mill he found to be equally heavy, crude, and expensive. Such a mill as this, together with the entire building, several sets of stones, and all other apparatus of a flouring mill, was built and pivoted on a single post or trunk of a tree set deep in the ground and braced, and on which it was turned to the wind by levers, pullies, horses, &c. These were termed "Post-mills."—Others, of which there were several kinds, were built on stone or brick towers, with a revolving cap or dome, and were called "Smock-mills," and were equally unfeasible. In Russia, the entire mill and building are built on log wheels, so as to be turned to the wind by levers and horses.

So, as an important branch of the mechanic arts, windmills seem to have been, in device and construction, very inferior to all other machines of any importance. And even now, in this age of mechanical wonders, when a labor-saving machine can be found for all kinds of work; imitating almost every possible manipulation,—thereby, too, a thousand-fold augmenting the necessity of a cheap and simple motive power,—still the windmill, with hardly an exception, is just where it was seventy-five or a hundred years ago. And the wind, that great power gift, that comes everywhere and for everybody, is still allowed to pass by unemployed; whereas, with suitable means of appliance it could be made, for many purposes, one of the most convenient and economical motive powers in the world, and consequently a general and substantial benefit to the race.

The reason why so little attention, for the last fifty years, has been given to the wind as a motive power, and, consequently, so little progress made in the improvement of windmills, must be owing to the fact, that just at the time when windmills began to attract scientific and mechanical observation, and to be somewhat extensively used, but still while yet they were in a crude and unperfected condition, and therefore, their practicability, applicability, and usefulness, but very partially tested, the steam engine came to be used, and thus coming in competition with windmills, while yet they were so imperfectly developed, at once outstripped and superseded them; since when, inventors and mechanicians have been so much taken up with this one, great modern power—steam that they have too much neglected the thing that went before, and thus have overlooked the utility of the wind.

The numerous attempts, however, recently made to render the Windmill automatic or self-regulating, mark a new era in its history. The first nominal self-regulating windmill invented in this country was patented about the middle of the year 1853; previous to which time no general effort was ever made by practical and scientific mechanics to bring the windmill into general use by rendering it automatic in its operation.

True, the wind would not answer the purposes of steam as a locomotive power on land, or as a stationary power even, in the majority of cases where steam is now used; but with perfected means of appliance, it would answer every use of steam in many instances where steam is now employed, besides being infinitely cheaper, and more easily managed; and the instances are innumerable in which such a mill might be applied, where now steam cannot be afforded.

The want of appreciation of the economy, universality, and other advantages of the wind, does not seem to be at all in keeping with the spirit of the present age. Estimate for a moment, the amount of force that can be obtained from an acre of land by converting its vegetable produce into muscle or steam, and see how small it is compared with the force of the wind that sweeps over that acre during a year. The aggregate force of the wind that rushes like a universal river of air, over every city and vilage, if equalized and applied, would propel every machine, and elevate all the public water.

And though such an equalization and applica- is not possible, yet its possible application and feasibility as a motive power, especially for the farmer, and also for that class of mechanics, and for those purposes which require not constancy so much as quantity of power must be apparent to every mechanic.

In Holland 475,000 acres are kept dry by 815 windmills. The water to be removed is, of course the fresh water from rain, springs, and rivers; and some doubtless from the infiltrations of the sea.—The work of one windmill is sufficient to keep six hundred acres sufficiently free from water.

Among the uses which may be made of the wind, a very useful application of it would be in elevating water and sawing wood for railroad stations. All that is needed to render it wholly adequate for this purpose is to economize the working of the mill by enlarging the tank.

Such a power possesses advantages over steam or horses in being more economical in its first cost; in being self regulating so as to require no attendance, in its exemption from liability to get out of order so as to require extensive repairs; in consuming no fuel, eating nothing, entailing no risk by loss of fire, explosion or death. and in being available at all times when the wind blows, whether night or day.

Journal of Railroad Law.

Weed *vs.* The Saratoga and Schenectady Railroad Co. 2 Am. R. R. Cases, p. 470.

The Saratoga and Schenectady railroad connects at Schenectady with the Mohawk and Hudson railroad which continues the route to Albany. The lines are owned by separate companies.

Mr. Barnes, who was the collecting agent of the plaintiffs, started in the Saratoga and Schenectady railroad for Albany. He bought at the defendants' ticket office in Saratoga a through ticket to Albany, and deposited his baggage in the baggage car directed to that place. When he arrived at Albany his trunk was gone. He sued the Saratoga and Schenectady railroad company, and the question arose whether they were liable for the loss of the trunk, it not appearing whether it was lost on the route between Saratoga and Schenectady, or between Schenectady and Albany. The Court held that they were liable for the safe transportation of the trunk *to Albany.*

The Court said—

"The defendants having undertaken to carry from the Springs to Albany, cannot now be allowed to say they were in truth carriers no further than Schenectady, the termination of their own road. As to the parties for whom they may thus undertake, they are estopped to deny that they are carriers for a distance commensurate with what they engage for. In order to limit their liability to a part of the route, they should at least have given to Barnes notice that after the car struck the track beyond Schenectady, he must look to another company, if that were the fact.—But it was not even in proof that this was so.—*Non constat* that the Mohawk and Hudson company had agreed to be accountable for the losses from cars which the defendants might run on their road. On the contrary, the agent of the defendants himself proceeded through; and he does not say that he was employed as agent for any part of the distance, by the other company. At any rate, the defendants induced the plaintiff's agent to give

them credit as carriers for the entire distance; and should be bound on the principle laid down by Mr. Justice Nelson, in Welland Canal Co. *vs.* Hathaway, 9 Wend., 483.

The rule laid down in this case in regard to the liability of a railway company for the loss of goods beyond the limits of its own line, is the same which prevails in England. The question was first presented in that country in the case of Muschamp *vs.* The Manchester and Preston railroad company; 2 Eng. R. R. Cases, 607. A box was carried into a station of the defendants marked for transportation to a place beyond the limits of their line, but on the line of a road connected with their own, and was lost after it had passed beyond the limits of their road. The declaration alleged a contract to carry to the place designated, and upon the trial it was proved that the agent of the company who received the box, upon an offer of payment of the price of carriage, suggested that the payment had better be made at the place of delivery. The judge charged the jury, "that when a common carrier takes charge of a parcel directed to a particular place, and does not by a positive agreement limit his responsibility to a part only of the distance, that is *prima facie* evidence of an undertaking to carry to the place to which it is directed, although that place might be beyond the limits of his trade as carrier." The jury found for the plaintiff, and upon a motion for a new trial for misdirection, the Court of Exchequer held the ruling to be correct, and that the jury were justified in finding their verdict. The liability of the defendants was determined by their contract, and it was for the jury to ascertain the nature and extent of that contract as a matter of fact. The rule thus laid down, was affirmed by the judges of the Queen's Bench in Watson *vs.* The Ambergate, Nottingham, &c., railroad company; 3 Eng. Law and Equity, R. 497. The Court of Exchequer again affirmed their previous decision in Scotthorn *vs.* The South Staffordshire railroad company; 18 Law and Equity, R. 553. Baron Alderson in giving his opinion says: "The whole question is, what was the contract between the parties? and that actually amounts to a question of fact." See also Wilson *vs.* The York and North Midland, &c., railroad company, in a note to the last mentioned case.

In Crouch *vs.* The London and Northwestern railroad company; 25 Eng. Law and Equity, R. 287; the question came before the Court of Common Pleas in a new aspect. The plaintiff sued the defendants for refusing to carry packed parcels from London to Sheffield and Glasgow. The defendant's road extended only a part of the way from London to the respective places, but they had arrangements with the intermediate companies, so that the cars from their road passed over the whole distance, without interference of the other companies. The defendants were in the habit of receiving packed parcels to carry to Sheffield and Glasgow, and they had agents in those places to distribute the parcels when received.—The defendants refused to receive parcels from the plaintiff to carry to those places, though they offered to carry them to the terminus of their line. The plaintiff brought an action for their refusal, and the defendants contended that they were not bound, as common carriers, to carry beyond the limits of their own line. But the Court held that, like natural persons, railway companies were bound to discharge the duties of the character which they assumed, and if they held themselves out as carriers to a place beyond their line, they were liable for refusing to carry.

The English Courts have thus refused to consider the liabilities of railway companies, as being in any way limited to the line of their road, but hold them liable upon their contracts, which are to be ascertained by the verdict of the jury.

The American cases are not so uniform upon this point. We shall have occasion to speak of them in our issue of next week.

New Orleans, Opelousas and Great Western Railroad.

A short time since we analyzed the Directors' report of the New Orleans, Jackson and Great Northern Railroad. We shall now proceed to do the same with the report of the New Orleans, Opelousas and Great Western Railroad, a copy of which has been handed us by the President.

This work was commenced under favorable auspices in 1850; a series of misfortunes and discouragements, all of them uncontrollable, after the lapse of less than a year, then ensued. But notwithstanding these drawbacks, and others arising from the failure of contractors to perform in good faith their engagements, the road was built from Algiers to Terrebonne, a distance of fifty-four miles, and placed in good running order in the winter of 1854-55. It was at this period of heavy indebtedness, diminished resources, and impaired credit, that the present Board commenced their labors, a statement of which is given in the report now before us.

The first move on the part of the new Board was to abrogate the contract system; a system by which the Company had been most egregiously duped and swindled, and brought to the verge of bankruptcy. The Vice President of the Road, Mr. Segur, an intelligent, driving, go-a-head man, about the 25th of last March, took the work in hand; he was provided with the requisite funds, with which he furnished himself with laborers, clothing material, and working tools, and with the co-operation of a skillful Engineer, Mr. G. W. R. Bayley, the track was laid, and the road completed to Tigerville, on the Bayou Black, on the first day of October. "In fifteen days afterwards the line was complete between that place and Algiers; passenger and freight trains running daily; communication opened with Attekapas, by steamboat connection; so that a journey formerly of three days, and in every way inconvenient, is now performed in ten hours with ease and comfort; and means for uninterrupted transportation of produce and merchandise, to and from New Orleans, provided for a rich section of country hitherto almost inaccessible, excepting at very uncertain periods of high water."

Encouraged by the success accompanying this enterprise, so expeditiously and economically accomplished by themselves on "their own hook," without the intervention of contractors, they immediately set about extending the road to the Bayou Bœuf, seven miles beyond Tigerville, and where they meet tide water, which point they expect to reach next month. The cost of these two sections (exclusive of iron, etc.,) from Terrebonne to Tigerville, 11¼ miles, and from Tigerville to the Bayou Bœuf, 7 miles, under the direction of the Board, is set down at $199,799, which is one hundred thousand dollars less than the sum agreed to be given to the contractors a year ago, for the same work, thus saving that amount to the company.

In the course then of a few weeks, a month at farthest, we shall have a first class and paying road of 51¼ miles to the Bayou Lafourche, a rich sugar region—3 miles further to the Terrebonne, a very important station, and 11¼ miles to Tigerville, on the Bayou Black, from which last two stations, we receive the produce of the Parish of Terrebonne—thence 7 miles to the Bayou Bœuf, to tide water—in all 73 miles from New Orleans.

This terminus, which is designed to be merely a temporary one, is a most important point, and which must be the depot of a surpassingly rich and increasing trade. The Bayou Bœuf, with banks eight feet above tide water, has a width of over 600 feet, with a depth of water at all times of not less than 15 feet. It is only 45 miles from the entrance of the Atchafalaya Bay and about 245 miles from Galveston, to which place, passengers from New Orleans by this route (steamship connecting at Bayou Bœuf) may be conveyed in 24 hours.

The monetary affairs of the Company, although not as promising of immediate realization as desirable, are nevertheless hopefully encouraging. The entire cost of the 73 miles of road from New Orleans to the Bœuf, with depots, bridges, equipments, etc. and all put in the best running order, will be about $2,500,000. The resources for continuing the work nominally amount to $1,403,363. Of this sum there are $195,136 uncollected of individual stock, and $476,475 uncollected of the tax on parishes; excess of par value of bonds hypothecated on loans $478,822, and $253,000 of bonds, bills receivable, cash, materials, etc. The overdue debt of the Company is entirely paid, or satisfactorily provided for, and their credit re-established. By a contract recently made for ten years for the performance of ferry service between the two banks of the Mississippi at this city, there will be an annual saving to the road of $6,475. A contract has also been made with the Postoffice Department for carrying a tri-weekly mail to Tigerville, for $3,400 per annum. The Company have been persecuted by vexatious suits for frivolous claims, amounting in all to $386,737. One of these suits for $234,000 was a few days since decided by a jury in favor of the Company for the whole amount, and they expect favorable decisions in all of them. The net earnings of the road may be estimated at $1,000,000 per annum, and the rolling stock on hand, comprising engines, cars, etc., is all sufficient for the business of the road for the next twelve months.

We infer that it is the intention of the Direction to rest awhile at the Bœuf for a breathing spell; to retrace their steps the length of the road finished, and put it in complete running order for the accumulated business that will meet them at tide water from every portion of the richest region in Louisiana within striking distance. After recuperating, and refreshing their energies, and girding up their loins, and fortifying themselves with the sinews of all enterprise, they will be ready to prosecute the work according to the spirit and intention of the charter. But an interesting, and apparently a perplexing, question presents itself: How and where shall the proposed extension of the road beyond the Bœuf be commenced? Some contend that Bœuf should be bridged at once, and the road finished to Berwick's Bay. Others advocate a continuance thence across the Bay, through the parish of St. Mary to New Iberia, and so on in continuous line to Washington. Some suggest stopping at the Bœuf, and commencing on the west side of the Bay, and others that the extension should begin at Franklin. The Board of Directors are disposed to favor the idea of commencing at New Iberia, and constructing the road thence through the parishes of Lafayette and St. Landry to Washington.

Each of these plans has its respective advocates; and we are not wide of the mark when we say, that these respective classes of champions are influenced by considerations of interest in making their choice of plans. Should the Board of Directors give heed to their representations, the consequence would be, that they never would come to conclusions, and the road would never be extended beyond its terminus at Bayou Bœuf. There is only one course to pursue; the Board, in spite of memorials, representations, and threatening protests from interested sources, must take the responsibility of conducting the work according to their best judgment. The Board comprise some of our best citizens; and they are men of unimpeachable probity, and enjoy the unqualified con-

fidence of the community. The President is universally recognized as a sterling citizen, of great energy, and active, industrious habits; and with his efficient Vice President, skilful Engineer, and faithful Clerk, backed by the counsel and advice of an intelligent Board, no fears are to be entertained that the interest of the enterprise will be sacrificed, or in any wise compromitted.

Bnt to extend the road at or from any point, and according to any of the before mentioned plans, requires money. Some of the resources stated in this report are to be made available. The Parishes and stockholders that are in arrears must pay up; and the planters, that class of our people who are beyond all others to be benefitted by this road, must no longer be laggards, and subject themselves to the reproach of being stolidly blind to, and ignorant of, their own interests. Every planter, within striking distance of this road, can, by a most striking arithmetical rule, ascertain the difference between the cost of transportation of his crop by railroad and by the primitive, old fashioned, tardy process. The saving of expense and of time is so much made, with the other still greater consideration, that the certainty of transportation gives him the advantages of a favorable market. The same principles apply to his return supplies, and the sum saved, as we have before said, is a matter of calculation. But by what process, or according to what standard is he to estimate the increased value of his lands? Here he will find himself entirely adrift; for the owner of lands, rich and productive as they may be, but situated remote from market and almost inaccessible, can form no conception of the enhanced value the same lands acquire by being brought into speedy and certain communication with market. We have no hesitation in saying, and we do so after due deliberation, that the planters within striking distance of the line of route from Bayou Bœuf to Washington, might build the entire road at their own cost, and their lands would be enhanced in value from one hundred to five hundred per cent. We can, and will prove to a demonstration, that such is the fact.—*N. O. Bulletin.*

La Crosse and Milwaukee Railroad.

The fourth annual report of this company, being for the fiscal year ending 31st December last, shows that very considerable progress in construction has been made during the year. At date of previous report no part of the road was in operation; though considerable expenditures had been incurred for various objects, as right of way, grading, iron, ties, &c. The directors early set to work, in order to have the 95 miles between Milwaukee and Portage City completed before the close of 1856. An issue of $950,000 of first mortgage bonds had previously been made on this division. Their efforts have been so far successful that the road is now open to Horicon, 51 miles, whence it was to be extended ten miles farther last February, leaving only 34 miles to be finished this present year. No doubt is entertained of their ability to accomplish this. The road is thoroughly ballasted for 34 miles. For nearly all the distance to Beaver Dam, 61 miles, the right of way has been obtained 100 feet in width. Most of this, with depot grounds, has been donated them. They own ample and commodious depot grounds at Milwaukee, with the requisite piers, &c., erected.—Warehouses and an engine house capable of holding eight engines, have been put up, with machine and blacksmith shops, turn tables, &c.

So far, everything has been made of first class character; and it is determined that in this respect, the road shall have no superior in the Western country. The company own 12 locomotives, (10 of which have been received), 10 first class passenger, 2 baggage, and 193 other cars of various kinds. The equipment is also said to be of a very superior character. A large increase to this will be needed in spring.

The road, when definitely located, is expected to be 198 miles long, 95 of which form what is called the Eastern Division. The cost of this is estimated at one half of the whole work. The total expenditures to 31st December last, were $1,883,963, of which $1,787,650 were upon the Eastern Division. The sum of $769,520, it is estimated, will complete the latter, making a total of $2,557,170, or $26,917 per mile. The means from which the present outlay has been derived are—

Stock subscriptions	$1,037,832
City of Milwaukee	314,000
First mortgage bonds	450,000
Floating debt, (maturing in 1856, 1857, and 1858	82,131
	$1,883,963

The means for completing the Eastern Division are—

Total stock subscription applicable	$1,607,700
Less stock already collected	1,037,832
Balance	$569,868
Stock to contractors	200,000
Portage City	75,000
Mortgage bonds unsold	500,000
Total	$1,344,868

Deducting from this the estimated cost of completing the Eastern Division, $751,651, there is left $593,217, most of which, after allowing for contingencies, will be applicable to the Western Division.

The business of the road so far has much exceeded the expectations of its friends. On account of the nature of the country traversed, little business was expected before reaching Horicon. Some difficulty had been experienced with a contractor, by which its opening was necessarily somewhat delayed. It is believed that during the present year, it can be opened to Newport, 112 miles from Milwaukee. Much, however, will depend upon the punctuality with which the stockholders will meet the requisitions made upon them.

The first section, 30 miles, was opened in Aug. last. Horicon, 21 miles farther, was reached on the 31st December. The receipts for that period were $32,134. Two daily passenger and two freight trains each way, will in future be run. For 1856, the receipts are estimated at $400,000, from which it is believed a dividend of 16 per cent. can be declared, after meeting all necessary charges. It is proposed to create a sinking fund of $11,500 per annum for meeting the $500,000 bonds yet to be sold, at maturity.

The route selected is unusually direct. Owing to the formation of the country, it is stated that no competing line can be run between this line and that of the Milwaukee and Mississippi road, without grades of 100 feet to the mile. The highest on this is fifty feet. The course of the Mississippi river above La Crosse makes it equally favorable as to competition on the north. With its connections through Michigan and Canada West, the road will afford a very direct route from the Upper Mississippi to the eastward.

In reaching Portage City, on the Wisconsin river, the road will derive an important traffic from the lumber business carried on down that stream. At Iron Ridge, 45 miles from Milwaukee, it strikes one of the richest and most available deposits of iron ore in the world. This has already been turned to valuable account.

Several connections are already in progress, al of which will become important feeders. The principal of these are—the Chicago, Milwaukee, and Green Bay; the Milwaukee and Fond du Lac; the Horicon and Berlin; the Oshkosh and Waupun; the Chicago, St. Paul, and Fond du Lac; the Beaver Dam and Madison, &c.

The Directors for 1856 are—

Messrs. Stoddard Judd, S. L. Rose, Hiram Barber, E. D. Clinton, Moses M. Strong, James Ludington, Byron Kilbourn, Edwin Townsend, Moses Kneeland, Hugh McFarland, R. T. Kneeland, S. T. Smith, C. A. Stevens, and Stephen H. Alden.

Mr. Judd is President; M. Kneeland, Vice President; James Ludington, Treasurer; L. Burnell, Secretary; W. R. Sill, Chief Engineer; B. Kilbourn, Superintendent; M. M. Strong, Attorney; and S. H. Alden, General Agent.

Explosion of Steam Boilers.

CURIOUS PROPERTY OF WATER DIVESTED OF AIR.—In a lecture recently delivered before the Royal Cornwall Polytechnic Society, by Robert Hunt, F. R. S., attention was directed to some most remarkable points in connection with the action of heat on water that contains no air, stating that, arising from this circumstance, as well as from the spheroidal condition of the steam generated, we have two very active and predisposing causes of boiler explosions. Water we know in three conditions—as a fluid, as steam, and as ice—or as solid, liquid, and aeriform. Water is frozen by the loss of heat necessary to maintain its fluid state; ice formed during agitation contains no air-bubbles, but, under ordinary circumstances—as Wenham Lake ice—the upper portion is filled with air-bubbles, in straight lines, as if in endeavoring to make their escape, they became entangled among the crystals. It is a remarkable fact that water in the process of congelation has the power of rejecting everything; consequently, all the air the water contains is expressed. If we get water which contains no air, and prevent the access of air to it, it will not boil at 212° Fahrenheit. In this state, we see the temperature increasing to 230°, 240°, or even 250°, and advancing to between 270° and 280°; about these points the whole mass will explode with the violence of gunpowder.

This condition of water is not unfrequently found formed in steam boilers, and that during the process of ebullition, the steam carries off with it the air, the water in the boiler containing very little remnant of the air itself. It often happens that a steam-boiler explosion occurs after a rest of the engine, and that, when the men return, the feed-water being applied to the water, explosion takes place. Prof. Donne has found that, if we take water of this peculiar character, bringing it up to 230°, and place a single drop of ordinary water into it, the whole will boil with extreme violence. Supposing that ordinary water contains no air, and the feed-water is turned on, the entire quantity will then burst into explosive ebullition. We shall probably find, therefore, in connection with boiler explosions that, to the absence of air may be attributed many boiler explosions, so frequently happening, which otherwise cannot possibly be accounted for. It may be further stated, that if we take a glass of water and add any poison—say corrosive sublimate, or a strong acid, or even an ardent spirit—and then freeze the water, agitating during the process, we shall find the ice get tasteless, colorless, and inert, and that the poison, the acid, or the spirit will be gathered into an intense drop

in the centre of the ice, and all the body will be perfectly pure. To a knowledge of this fact may be attributed the practice of the Russian nobles, who, when they desired to have a more ardent and intoxicating drink than usual, plunged their bottles of wine or spirits into their frozen rivers, till the contents became solidified, and then drank the ardent drop which remained within the centre of the glass.

Atlantic and Gulf Railroad.

This is the name of a road, recently chartered by the Legislature of Georgia, which is designed to extend from a point near Waresboro, on the Satilla river, to the western boundary of the State, at any point between Fort Gaines and the junction of the Flint and Chattahooche rivers; so as to open up a speedy and direct route with the Gulf of Mexico at Mobile or Pensacola. By the terms of the charter, it is made the duty of parties named to open books for subscription in Milledgeville.—After the sum of $600,000 shall have been in good faith subscribed, the Governor is authorized, on behalf of the State, to take $500,000 additional. In case the subscription from other sources should exceed $600,000, the State to increase her quota in like proportion. No part of the superstructure to be laid until the Brunswick and Florida, or the Savannah, Albany and Gulf road is in running order to some point where a connection may be made with this road. The capital may be increased to $5,000,000; but in no case is the State subscription to exceed $1,000.000. Board of Directors to consist of nine shareholders, each owning at least $2500 of stock. In payment of the State subscription, the Governor to use money unappropriated, and for meeting deficiencies, to issue six per cent. coupon bonds, and having 20 years to run. By the sixth section, either the Savannah, Albany and Gulf or the Brunswick and Florida road may connect with the Atlantic and Gulf line, with equal privileges to both, it being the intention to provide a Main Trunk railway across the territory connecting the Atlantic with the Gulf of Mexico, that any Railroad in this State shall have the privilege and right to join the said Atlantic and Gulf Railroad Company, without any discrimination for or against such railroad adjoining thereto; provided, that the stockholders thereof build said road with their own money. The President is required to make semi-annual reports.—Produce of the State to have precedence over through freight coming from other States, so long as the State of Georgia remains a stockholder.

Ohio and Mississippi Railroad.

The Cincinnatti Gazette gives the following abstract of the ordinance, recently passed by the city council for the relief of the Ohio and and Mississippi railroad:

The preamble recites that, whereas the Ohio and Mississippi railroad company had entered into a contract with Wm. H. Aspinwall, Joseph W. Alsop, Henry Chauncey and others for the completion of the road, therefore,

Sec. 1. Remits the interest on the loan of $600,000 until 1861.

Sec. 2. Leases the wharf property without rent until 1861, and $30,000 per annum thereafter, with the privilege of purchase for $500,000.

Sec's. 3 and 4 Release the company from filling and grading the wharf property until 1861.

Sec. 5. Authorizes the purchase of $5000,000 of the bonds retained by the city on the wharf purchase.

Sec. 6. Permits the Company to occupy West Front street for their railroad, and with the 3d rail.

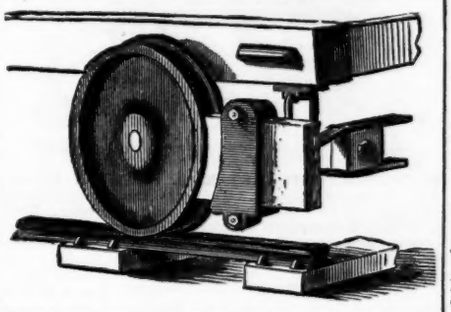
Sec. 7. Authorizes William H. Aspinwall, et al, to vote the city's stock until 1861, but obliges them to select one director designated by the City Council,] not however, to be a member of the Council.]

Sec. 8. Binds Mr. Aspinwall to pay all ground rents on the wharf property, and all liens on the same, and to finish the railroad by the 1st of Nov., 1857.

Sec. 9. Provides that this ordinance shall go into effect as soon as Messrs. Aspinwall, Alsop et al, signify their acceptance in writing filed with the City Auditor.

PAIGE'S

ADJUSTABLE CAR BRAKE BLOCKS!



BY this improvement the brake heads or shoes are separate, removable, and adjustable blocks of hard wood scantling, clamped by a face plate or cap to suitable sockets on the ends of the brake beams. The end of the grain of the wood is presented to the wheel, and as the shoes wear, they can be set uy to any required amount by loosening the face plate of the socket. The ordinary brake heads now in use must be replaced by new ones when they become a trifle worn. The present improvement obviates the necessity of this renewal, also that of shoeing the brakes with leather or iron. By using the end of the grain of the wood, a large amount of friction is had without danger of fire.

The NEW YORK ADJUSTABLE BRAKE COMPANY

are now prepared to apply this improvement on trial to cars in any part of the country, and no sales will be pressed until entire satisfaction is given.

The Brake is now in use on the HUDSON RIVER, HARLEM, BOSTON & LOWELL, and RUTLAND & BURLINGTON RAILROADS, and we invite Railroad Companies generally, through their Agents, to examine the practical working of this new and decided improvement upon all Brake Blocks now in general use.

☞ Please address C. DINSMORE, *Agent.*

DINSMORE'S RAILWAY GUIDE Office, 9 Spruce st., N.Y.

Lord & Wright,

Counsellors at Law Cincinnati, Ohio. 15t

ELLIOTT & CO.,

NO. 4 WILLIAM STREET, NEW YORK.

(ONE DOOR SOUTH OF BEAVER STREET.)

RAILROAD AGENTS

AND

COMMISSION MERCHANTS,

PURCHASE AND SELL ON COMMISSION

FOR RAILROAD COMPANIES.

RAILROAD IRON—They contract upon the most favorable terms for the delivery of Rails either on board ship in England or in the United States.

LOCOMOTIVES & CARS.—Having connection with some of the best builders, they furnish the best at the lowest rates for cash or good paper.

WHEELS & AXLES.—They are Agents for two of the best Forges, and one of the first Wheel Makers, and can supply orders with promptness and to give satisfaction.

CHAIRS & SPIKES.—They are authorised to sell wrought and cast iron chairs and spikes from the best known makers at the lowest rates.

All orders will be promptly filled and at the lowest market prices.

CAR FINDINGS in variety.

☞ Railroad Secretaries are particularly requested to forward by mail copies of their Reports from the first

ELLIOTT & CO.,

No. 4 William st., N. Y.

NEW YORK

IRON PAVEMENT

AND

STREET RAILWAY CO.

Office Nos. 8 and 10 Wall st.,

ROOM 16.

TO THE

MUNICIPAL AUTHORITIES OF THE SEVERAL CITIES OF THE UNITED STATES,

AND TO

RAILROAD COMPANIES

AND OTHERS INTERESTED.

THE above-named Company, established in the City of New York, offer you in

ROBINSON'S IRON PAVEMENT,

1st. The cheapest pavement ever used, *because most enduring at least cost of repair.*

2d. The safest pavement *for either man or beast to travel on.*

3d. The most economical pavement, *because the tear and wear of both beasts and vehicles, of pleasure and burthen, are less upon it than upon any other in use.*

4th. The most beautiful pavement to look upon, *because the most cleanly and variegated, and free from dust.*

5th. The easiest and least tiresome pavement to ride upon, *because most even of surface.*

6th. The least noisy pavement to use or reside near.

7th. The best pavement ever used, *everything desirable considered.*

This Company is enabled to furnish cities and others with an Iron Pavement for every use, at a reduced price. They will contract to lay it down upon any graded street, of superior strength, beauty, and perfection to that recently laid down in Boston, or that in Nassau street, fronting the Post Office, in this city, for

$5 to $6.50 PER SUPERFICIAL YARD,

in substitution for any existing pavement. This price is over $4 per square yard *less* than the first laid down in Boston cost that city; AND $1 *LESS* PER YARD THAN THAT RECENTLY LAID DOWN IN BOSTON COST; *AND IS $1 PER SQUARE YARD LESS THAN THE RUSS PAVEMENT HAS COST*, that has so beautified, yet rendered most dangerous and expensive to *man*, and *beast*, and *vehicle*, a large extent of Broadway, and some other streets of New York city.

This pavement is also the best and cheapest for all railroad tracks, where horses are employed, and for all *highway railroad crossings*, now usually made of plank, which are subject to constant disorder and repair.

Lighter and less expensive patterns (averaging from $1 TO $3 *PER YARD* are furnished for walks in public parks and grounds, also for side walks, private lanes, yards, foot-ways, cellars, and approaches to stables—each being most permanent, cleanly, and ornamental.

In every case *ENTIRE SATISFACTION WILL BE GUARANTIED* to all purchasers with whom contracts shall be made for laying down this pavement.

FOR A SMALL ANNUAL PER CENTAGE ON THE COST OF LAYING DOWN, CONTRACTS WILL ALSO BE MADE FOR KEEPING THIS PAVEMENT IN REPAIR FIVE, TEN, OR TWENTY YEARS, OR EVEN FOR A LONGER PERIOD.

The municipal authorities of cities, and directors of railroad companies, and all enterprizing citizens who wish to blend utility with embellishment of their private grounds, residences, &c., are specially invited to investigate this subject. The surpassing usefulness of the Iron Pavement has been too well established in the public streets of Boston as well as in a section of Nassau street, in this city, to require experiment or argument to uphold it.

All additional information that may be desired will be promptly communicated, and orders promptly executed, by letter or in person, to the undersigned, *GENERAL MANAGERS OF THE COMPANY'S BUSINESS, AT THEIR OFFICE IN THIS CITY, NOS. 8 AND 10 WALL STREET.*

We are also allowed to refer for general information on the subject, to the gentlemen whose names are subjoined, as Honorary and Consulting Directors, not interested as shareholders in the Company's business.

SMITH, ELEVETH & ROBINSON,

General Managers for the Iron Pavement and Street Railway Company.

HONORARY AND CONSULTING DIRECTORS.

HON. B. B. FRENCH, } *Washington, D. C.*
CHARLES MONROE, ESQ., }
DAVID BURBANK, ESQ., *Baltimore. Md.*
JOHN J. SPEED, ESQ. *Detroit, Mich.*
HON. J. V. C. SMITH, *Mayor of Boston, Mass.*
L. L. SADLER, ESQ., *Treasurer of Union Telegraph Company, Boston, Mass.*
HON. H. F. FRENCH, *Associate Judge, Superior Court, Exeter, N. H.*
HON. JOHN M. WOOD, *(Member of Congress,) Portland, Me.*

SALE OF THE MAYSVILLE & LEXINGTON R. R.,

with all its Property and Franchises, Locomotives, Cars, &c.

JAMES PUNNETT and others, plaintiffs, *against* THE MAYSVILLE & LEXINGTON RAILROAD COMPANY and others, defendants.—By virtue of the Judgment of the Fayette Circuit Court, rendered in the above case, I will sell, at public auction, on *Wednesday, the 23rd day of April*, 1856, at the Public Square, in the City of Lexington, State of Kentucky—

THE MAYSVILLE & LEXINGTON RAILROAD;

both that part of the road which is completed and the part unfinished; embracing the road bed, and superstructure where the same is laid down, the right of way, and all lots of land in and adjacent to the road track, with all the buildings, stations, car-houses, and improvements belonging to said railroad, together with the franchises of the Maysville and Lexington Railroad Company; all of which will be sold together, upon credits of six, twelve, eighteen, and twenty-four months, in equal instalments.

At the same time and place, I will also sell all the Lots of Land belonging to said Company, and not adjacent to the railroad track—consisting of a lot of land in the City of Lexington, a tract of land in Fleming County, and town lots in Paris and Millersburg, on credit of six and twelve months, in equal instalments.

And at the same time and place, I will sell all the Locomotives, Freight and Passenger Cars, Cross-Ties, &c —consisting in part of two locomotives and tenders of twenty-four tons each, three passenger cars for sixty passengers each, one entirely new and all in good order; seven box freight cars, eleven platform cars, eleven tops for platform cars, five gravel cars, and a top for another; fifteen pairs of car wheels, a hand car, a lot of bridge and car irons; 9,500 cross-ties near Maysville, 1,380 of which are of locust and the remainder of oak; about 6,000 cross-ties along the line of the railroad between Lexington and Millersburg. The new passenger car, two freight cars, and the tops for platform cars, are in Maysville, all the other rolling stock is in Lexington, and the whole is of 4 feet 8½ inches gauge. All to be sold on a credit of six months.

The purchasers will be required to execute bonds for the purchase money, having the force of Judgments, with good security, to be approved by me, of one of the following kinds, to wit:—1. Personal security. 2. First Mortgage Bonds of the Maysville and Lexington Railroad Company. 3. Mortgages in real estate in counties near this railroad or the Covington Railroad. 4. State and United States Bonds. 5. A First Mortgage on a productive railroad.

The property will be exhibited to all persons desirous of purchasing, by the undersigned, who will be found in Lexington, Ky, or by A. M. JANUARY, at Maysville. Letters of enquiry, addressed to me, will be attended to. EBEN MILTON,
Receiver and Commiss'r,
2m8 LEXINGTON, Kentucky

New York and Erie R. R.

On and after *Monday, Dec.* 31*st*, 1855, and until further notice

PASSENGER TRAINS will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a.m., for Buffalo direct, without change of baggage or cars. At Hornellsville this Train connects with a Way Train for Dunkirk and all stations on the Western Division.

MAIL, at 8¼ a.m. for Dunkirk and Buffalo, and intermediate stations.—Passengers by this train will remain over night at Owego, and proceed the next morning.

NEWBURGH EXPRESS, at 4 p.m., for Newburgh direct, without change of cars.

ROCKLAND PASSENGER, at 4 p.m., via Suffern's, for Piermont and intermediate stations.

WAY PASSENGER, at 4 p.m., for Otisville and intermediate stations.

NIGHT EXPRESS, at 5 p.m. for Dunkirk and Buffalo.

EMIGRANT, at 5 p.m., for Dunkirk and Buffalo and intermediate stations.

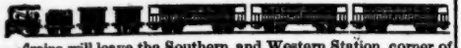
No Train will leave on Sundays.

These Express Trains connect at Elmira, with the Elmira & Niagara Falls Railroad, for Niagara Falls, at Buffalo and Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati Toledo, Detroit, Chicago, etc.,

1.tf. D. C. McCALLUM, General Sup't.

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE
SOUTH AND WEST.



Trains will leave the Southern and Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York	to	Wilmington	$15 50
do	do	Norfolk	8 50
From Philadelphia	to	Wilmington	14 00
do	do	Norfolk	6 50
do	do	Petersburg	9 00
do	do	Richmond	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York	to	Cincinnati	$13 50
do	do	Louisville	14 50
From Philadelphia	to	Cincinnati	11 00
do	do	Louisville	12 00
From New York	to	Indianapolis	16 00

An extra charge will be made for meals and state rooms on board the boat. GEORGE A. PARKER, *Sup't.*

Lowell Machine Works.

WARREN ALDRICH (late ALDRICH, TYNG & Co.) manufacture and furnish to order, at short notice,

Machinists' Tools

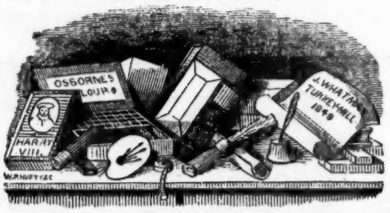
of various description and with the latest improvements; as *engine lathes*, with swing 16, 20, 24, 28, 30, 36, 48 inches, up to 7½ feet, and bed made to turn any desirable length; *planing machines*, to plane 3½, 6, 8, 10, 12, 18, 20, 22 feet long, and 18, 24, 28, 36, 40, 48, 60 inches square; also *hand lathes, compound planers, slotting* and *shaping machines, vertical drills, bolt cutters*, and many other tools used in railroad repair and machine shops.

Lowell, Mass., Jan'y 1, 1853. 41.1y

STATIONERY.

Hufty's

Engineers, Architects and Draftsmen's
STATIONERY EMPORIUM.



WHATMAN'S TURKEY MILL DRAWING PAPER, Tracing paper, Plan and Profile, Protractors, Drawing Pins, Faber's Jackson's and other makers' Pencils; Field, Level, and Memorandum Books of various patterns; Mathematical Instruments, Tape-lines, Mouth Glue, Cross Section Paper, Triangles Label Brushes, Gum Bands, Maiden Gum, Red Tape, Ink, Inkstands and sand, Water Colors, Pallets, Patent Binders for letters, Portfolios, etc., together with a general assortment of Stationary and Blank Books.

All goods packed with care, and forwarded to any part of the United States. JOSEPH HUFTY,
Successor to H. L. Lipman,
May 15, 1854 136 Chesnut St. Philadelphia.

FINANCIAL.

Meigs & Greenleaf,

Office No. 23 *William st.,*

WILL give prompt attention to the purchase and sale of STOCKS, BONDS, &c., strictly on commission. Orders respectfully solicited.

CHAS. A. MEIGS, late Cashier Am. Ex. Bank.
A. W. GREENLEAF, late of No. 2 Wall st.

REFERENCES: American Exchange Bank, Bank of the Republic, Metropolitan Bank, Merchants' Bank. 1y18

Wm. S. Rowland & Co.,

RAILROAD IRON
AND
Commission Merchants,
NEGOTIATORS OF CREDIT FOR RAILROAD COMPANIES,
No. 6 WALL STREET,
25tf NEW YORK.

ELLERY & GIBBONS,

No. 10 WALL ST.,

BANKERS, DEALERS in DOMESTIC and FOREIGN EXCHANGE, &c., are prepared to negotiate Stocks, Bonds and Financial Securities in general.

REFERENCES.

D. R. MARTIN, Pres't Oc'n B'k, N. Y.
SILAS K. EVERETT, of Everett & Brown, N. Y.
WELLS, FARGO & Co. 18tf
CORNELIUS W. LAWRENCE, Esq., N. Y.
DREXEL & Co., Bank's, Philad
SAMUEL WILLETS, Pres't of Am. Exchange Bank, N. Y.

Rollins & Haviland,

STOCK BROKERS,
38 Exchange Place NEW YORK.
JOHN T. ROLLINS. WALTER HAVILAND.

London Agency for Sale of Bonds, &c.

MESSRS. LANCE & CO. are making more generally known in England, the great advantages of American Securities for investment.

During the present year Messrs. Lance & Co. have disposed of a large amount of American and Canadian Railway Bonds, and are fast extending their connection, they will be happy to correspond with parties having *good* Amer. Securities for sale.

Messrs. LANCE & Co. have had experience in the purchase and shipment of iron, and offer their co-operation to those about to negotiate for the disposal of bonds and the purchase of rails.

P.S.—Presidents of railway companies are requested to favor Messrs. L. & Co. with Exhibits or Reports of their companies as published. 10 Regent st., WATERLOO PLACE.

LONDON, Oct. 1855. 6m46

ENGINEERS.

LITHOGRAPHIC AND DRAUGHTING.

Office 131 Fulton st., NEW YORK.

G. WEISSENBORN,

CIVIL AND MECHANICAL ENGINEER,

employs Draughtsmen, and is at all times prepared to execute his work with promptness. He will furnish Architectural and Mechanical Drawings, Linear and Perspective, and if desired they will be lithographed in the HIGHEST STYLE OF THE ART.

ENGINEERING.

THE undersigned is prepared to furnish Specifications, Estimates and Plans, in general or detail, of Steamships, Steamboats, Propellers, High and Low Pressure Engines, Boilers, Mill Work, etc., etc. Particular attention given to the procuring and superintending of Locomotives, Tenders, Cars, and Railway Machinery of every description.

General Agent Ashcroft's Steam Gauge, Allen & Noyes' Metallic Self-adjusting Conical Packing, Dudgeon's Hydraulic Jack, Sewall's Salinometers, etc, etc., etc.

Acts as Agent for the purchase or sale of, and has always on hand, Steamers, Locomotives, Engines, Boilers, Machinery, etc

CHAS. W. COPELAND,
Consulting Engineer,
1y17 64 Broadway, N. Y.

Railroad Suspension Bridge.
NOTICE.

BENJAMIN WATKINS, at Port Gibson, Mississippi, Architect and Engineer, will erect Suspension Wire Cable Bridges for railroad crossings from two hundred to three thousand feet span, and wooden bridges of three hundred feet span for any purpose of crossing, and he will also erect foot bridges for man and horse crossing with short or long spans in any part of the United States upon fair terms. Please address as above.

November 12th, 1855.

W. G. ATKINSON,

CIVIL ENGINEER, SURVEYOR AND DRAFTSMAN,
CUMBERLAND, Maryland.

RAILROAD routes located, planned and estimated. Maps and Reports furnished. Researches made for Coal, Iron, Copper, Lead and other Minerals, Metals, &c. Contract work in Tunnels and heavy Graduation measured and reported in detail. Topographical Drawings executed and Lithographs supplied by skilful artists. Mines explored, new Works laid off, and Geological Plans prepared. 8tf

ENGINEERING WORKS.

LYONS' TABLES.
To Civil Engineers and Contractors.

JUST PUBLISHED—A set of Tables for finding, at a glance, the true cubical content of Excavation and Embankments for all Bases, and for every variety of Ground and Side Slopes. By M. E. LYONS, Associate Engineer, Lebanon Valley R. R.

SHEET NO.				SHEET NO.			
1.	General Table for all Bases and all Slopes.			13.	for Base 18ft. Slop.		1½ to 1
2.	For Side Hill Cuts and Fills			14.	" 20	"	1½ to 1
3.	Base 12 ft. Slopes	1½	to 1	15.	" 24	"	¼ to 1
4.	" 14 "	1½	to 1	16.	" 24	"	1¼ to 1
5.	" 15 "	¼	to 1	17.	" 25	"	1¼ to 1
6.	" 15 "	1	to 1	18.	" 26	"	1½ to 1
7.	" 15 "	1½	to 1	19.	" 28	"	¼ to 1
8.	" 16 "	¼	to 1	20.	" 30	"	1 to 1
9.	" 16 "	1	to 1	21.	" 30	"	1¼ to 1
10.	" 18 "	¼	to 1	22.	" 30	"	1½ to 1
11.	" 18 "	¾	to 1	23.	" 32	"	1 to 1
12.	" 18 "	1	to 1	24.	" 32	"	1½ to 1

The Tables are printed in clear, bold type on tinted paper; sheets 25x16 inches. They may be used by candle-light without injuring the eye-sight. Each sheet is complete in itself, and embraces all that is wanted in connection with the Base or Slope designated, whether on level or side hill cross section.

Sold in separate sheets, at 25c. each, or the whole handsomely bound in cloth in one volume for $7.50, by JOSEPH HUFTY, 139 Chestnut st., Phila.; WM. MINIFIN, Baltimore, Md.; ENTWISTLE & SON, Alexandria, Va.; McCLEAR & Co., Toronto, C. W.; also

For sale at the office of this paper.

ENGINEER'S FIELD BOOK

By C. S. CROSS, *Civil Engineer.*

THIS work is designed as a pocket companion, and embraces all the necessary tables for prosecuting railroad surveys, in the most compact form.

It is subdivided as follows:

1st. The method of staking out railroad curves and keeping field notes.
2d. Railroad curve tables for expeditiously determining the points at which commences the curving.
3d. Application of the Prismoidal formula in determining the quantities of excavation and embankment of canals and railroads from transverse sections.
4th. Excavation and embankment tables for expeditiously determining the cubic yards from mean area.

It is a plain, clear and most valuable book for practical Railroad Engineers.

For sale at this office. Price $1.

Ewbank's Great Work.

TO MECHANICS AND ENGINEERS.
An important Book for all of you.
Now Ready,
A Description and Historical Account of
HYDRAULIC AND OTHER MACHINES
FOR
RAISING WATER.

With observations on various subjects, connected with the Mechanic Arts, including the progressive development of
THE STEAM ENGINE.

Descriptions of every variety of Bellows, Piston, and Rotary Pumps; Fire Engines; Water Rams; Pressure Engines; Air Machines; Eolipiles, &c. Remarks on Ancient Wells; Air Beds; Cog Wheels; Blowpipes; Bellows of various people; Magic Goblets; Steam Idols, and other Machinery of Ancient Temples; to which are added Experiments on Blowing and Spouting Tubes, and other original devices; Nature's Modes and Machinery for Raising Water; Historical notices respecting Siphons, Fountains, Water Organs, Clepsydræ, Pipes, Valves, Cocks, &c., in five books, illustrated by nearly three hundred Engravings.

Fifteenth edition, revised and corrected, to which is added a Supplement, by Thomas Ewbank, late U. S. Commissioner of Patents. DERBY & JACKSON, Publishers,
No. 119 Nassau st., New York.

Can be ordered through any Bookseller, or we will send it by mail, post paid, on receipt of price, **$2.50.**

SCIENTIFIC WORKS,
PUBLISHED BY
D. APPLETON & CO.,
346 and 348 BROADWAY, NEW YORK.

Appleton's Dictionary of Mechanics, Machines, Engine Work, and Engineering, 2 vols. 8vo.---$12.00
Bourne's Catechism of the Steam Engine, Bourne's Treatise on the Screw Propeller, 4to ---$9.00
Gillespie's Treatise on Surveying, 8vo---$2.00
Griffiths on Marine Architecture---$10.00
Henck's Field Book for Railroad Engineers---$1.75
Holbyn's Dictionary of Scientific Terms, 12mo.---$1.50
Knapen's Machanic's Assistant---$1.00
Lyell's Principles of Geology, 1 vol. 8vo---$2.25
Lyell's Manual of Geology, 1 vol. 8vo---$1.75
Overman's Metalurgy, 8vo.---$5.00
Templeton's Mechanic's, Millwright, and Engineer's Pocket Companion---$1.00
Ure's Dictionary of Arts, Manufactures, and Mines, 2 vols, 8vo. new edition.---$5.00

☞ D. APPLETON & Co. have on sale all the important English Engineering Works. 5tf

IMPORTANT TO
ENGINEERS, RAILROAD CONTRACTORS, and others.
Messrs. WILEY & HALSTED,
351 BROADWAY, NEW YORK,

BEG to inform those interested in Engineering, both Civil and Mechanical, that they keep constantly on hand, and offer for sale on reasonable terms, all the best and most approved works on the above-mentioned subjects, both
ENGLISH and AMERICAN.

They will also continue to supply the following Magazines punctually to subscribers at the annexed prices per annum:—

Civil Engineer and Architect's Journal---$7.50
Mechanic's Magazine---4.00
Practical Mechanic's Journal---3.50
Repertory of Patent Inventions---12.00
Artizan---4.00
Mining Journal---9.00

W. & H.'s CATALOGUE OF ENGINEERING AND MECHANICAL WORKS GRATIS TO ALL WHO DESIRE IT.

W. & H. will give especial attention to the importation of Engineering and Architectural works, either by the single volume or quantity, from England, France, and Germany.

New Book for Engineers.
Pocket Book
FOR
Railroad and Civil Engin'rs.

Containing new, exact, and concise methods for laying out Railroad Curves, Switches, Angles, and Crossings; the staking out of work, levelling; the calculations of cuttings and embankments, earthwork, &c.

BY OLIVER BYRNE.

EXTRACT FROM PREFACE.

1. The laying out of railroad curves by ordinate tables of whole numbers.
2. How to drive side stakes exactly, without trial and error.
3. When the cross sections of cuttings and embankments are irregular, a rule is given to find exactly, the height of equivalent level cross sectional areas.
4. A general earthwork table without supposing the side slopes to meet under the centre of the road.
5. The proper coning of wheels of railroad cars, and the true rise of the outer rail on curves.

C. SHEPARD & CO., *Publishers*, 152 Fulton st., N. Y.

N.B.—Price $1.50, and sent by mail free of postage.

The above book is got up in the most convenient style for Engineers, being in tucks, and containing blank paper for drawings with a drawing pencil attached. 3m7

New Works on Civil Engineering.

THE Field Practice of laying out Circular Curves for Railroads.—By JOHN C. TRAUTWINE, Civil Engineer—3d edition in pocket-book form.

A new and rapid method of Calculating the Cubic Contents of Excavations and Embankments, by the aid of Diagrams.—By John C. Trautwine, Civil Engineer—2nd edition with 10 Copper Plates.

Price One Dollar each—postage on the Curves Three Cents—and on the Excavation and Embankments, Six Cents.

For sale by WILLIAM HAMILTON,
Hall of the Franklin Institute,
January 18, 1854. Philadelphia.

PROFESSIONAL CARDS.

Atkinson, T. C.,
Mining and Civil Engineer,
Alexandria, Va.

Barnes, Oliver W.,
Chief Eng. Pittsburg and Connellsville R.R. Co., Pittsburg, Pa.

Edward Boyle,
Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York
Office 123 Chambers st.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

James Converse,
Chief Engineer Galveston, Houston & Henderson Railroad,
Galveston, Texas.

Alfred W. Craven,
Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,
Steam Marine and Railway Engineer,
64 Broadway, New York.

Davidson, M. O.,
Civil and Mining Engineer. Office Swanton Coal and Iron Co.,
51 *Exchange Place*, BALTIMORE, Md.

C. Floyd-Jones.,
Division Engineer 3d and 12th Divisions,
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Gay, Edward F.,
Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,
Syracuse and Binghamton Railroad, Syracuse, N.Y.

Gzowski, Mr.,
St. Lawrence and Atlantic Railroad, Toronto, Canada.

Grant, James H.,
Nashville and Chattanooga R. R., Nashville, Tenn.

Theodore D. Judah,
Chief Engineer, Sacramento Valley Railroad,
Sacramento, Cal. 1y23

Robert B. Gorsuch,
Civil and Mechanical, Steam and Hydraulic Engineer,
Tabernacle Building, 340 Broadway, N.York. 18tf

S. W. Hill,
Mining Engineer and Surveyor, Eagle River,
Lake Superior.

D. Mitchell, Jr.,
Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley Railroads, Pittsburg, Pa.

Samuel Mc Elroy,
Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,
Sackets Harbor and Saratoga R. R., 24 William St., N. Y.

Septimus Norris,
Civil and Mechanical Engineer, Philadelphia.

SamI. & G. H. Nott,
Civil Engineers, No. 6 Niles' Building, Change Avenue, Boston.

Osborne, Richard B.,
Civil Engineer, Office 73 South 4th st., Philadelphia.

Prichard, M. B.,
East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,
Chief Engineer Alleghany Valley Railroad, Pittsburgh, Pa.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

J. S. Sewall,
CIVIL ENGINEER,
ST. PAUL MINESOTA.

Charles L. Schlatter,
Chief Engineer Brunswick and Florida Railroad,
Brunswick, Georgia.

Straughan, J. R.,
Ohio and Indiana Railroad, Fort Wayne, Ind.

Shanly, Walter,
Chief Engineer Bytown and Prescott Railway,
Prescott, Canada.

Steele, J. Dutton,
Pottstown, Pa.

Charles B. Stuart,
Consulting Engineer, 23 William str., New York.

Edward W. Serrell,
Civil Engineer, 23 William st. New York.

Trautwine, John C.,
Civil Engineer and Architect, Philadelphia.

A. B. Warford,
Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

INSTRUMENTS.

Wm. J. Young
HAS removed his Engineering and Surveying Instrument Manufactory to No. 33. North Seventh Street, Philadelphia.

Knox & Shain,
Manufacturers of Engineering Instruments, 46½ Walnut st.,
Philadelphia. (*Two premiums awarded.*)

W. & L. E. GURLEY,
INSTRUMENT MAKERS,
TROY, N. Y.

INVITE the attention of Engineers and Surveyors to the Instruments made at their establishment.

Possessing facilities unequalled as they believe, by any other manufacturers in the Union, they are enabled to furnish instruments of superior quality, at lower rates than any other makers of established reputation.

We have recently published a work of 80 pages, giving a full description of our instruments, with their adjustments, prices, &c., which we will send by mail free of charge, to all persons contemplating the purchase of instruments.

Address—W. & L. E. GURLEY, TROY, N. Y.

Engineers' and Surveying INSTRUMENTS.
F. W. & R. KING,
226 BALTIMORE ST.,
BALTIMORE, MD.,

KEEP on hand, and manufacture to order, a general assortment of instruments for Engineers' and Surveyors' use—including Levels, Transits, Leveling Rods, Compasses, Chains, Drawing Instruments, Scales, Tape Lines, &c.

Repairing and Jobbing promptly attended to.

H. SAWYER
(of the late firm of SAWYER & HOBBY),
Manufacturer of Transits and Levels,

HAS removed to Union Place near Warburton Av., Yonkers. N. Y.

Railroad Instruments.

THEODOLITES, TRANSIT COMPASSES AND LEVELS on a new principle, with Fraunhofers Munich Glasses, Surveyors' Compasses, Barometers, Chains, Drawing Instruments, etc., all of the best quality and workmanship, for sale at unusually low prices by E. & G. W. BLUNT,
New York, Jan'y 1, 1856. No. 179 Water street.

To Engineers, Architects and Draughtsmen.

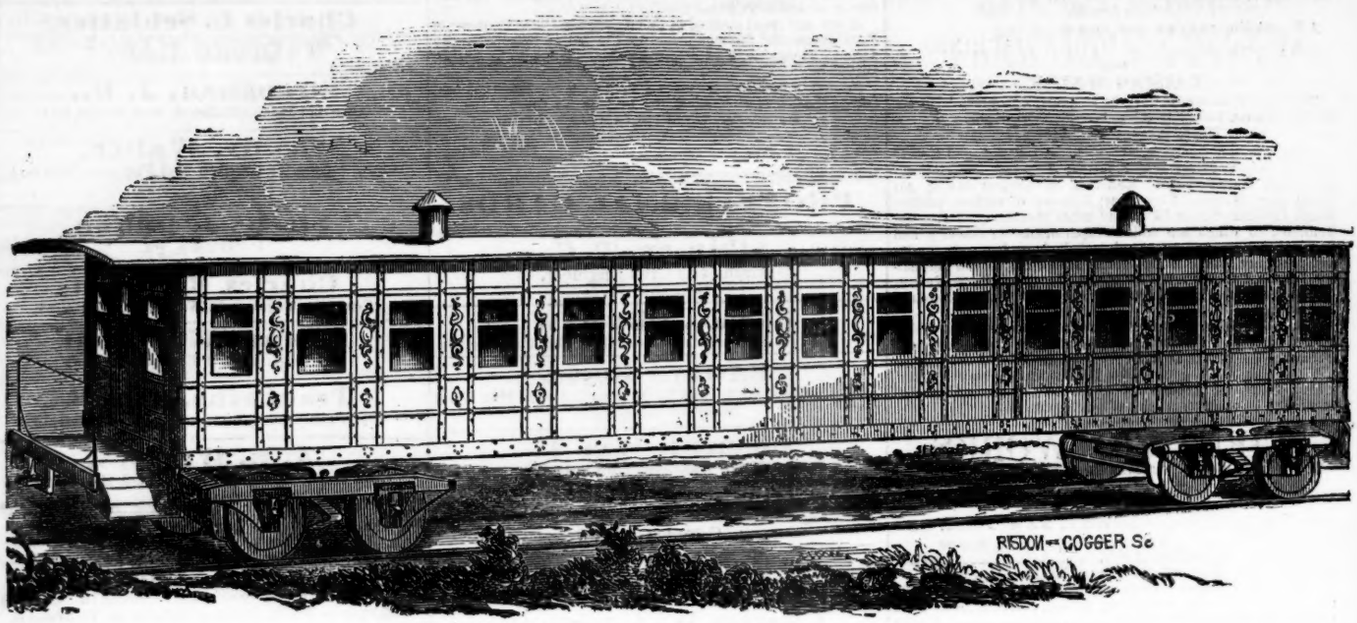
THE undersigned begs respectfully to inform Gentlemen in the above professions, that he has constantly on hand a great variety of instruments for Field and Office use.

JAS. PRENTICE,
Feb. 1, 1853. No. 1 Chamber street, New York.

TRANSIT FOR SALE
AT A BARGAIN.

AN excellent *Transit* made in DRESDEN and which cost there (where instruments are much cheaper than here) $250, may be had for $150. The standhead will need some alteration to adapt it to railroad purposes. Address *Transit* at this office. 5tf

LA MOTHE'S PATENT IRON RAILROAD CAR.



WE are now prepared to furnish this Car to railroad companies at short notice and reasonable rates.

Notwithstanding its extraordinary advantages, the prices will be arranged wholly with reference to the cost of construction—without regard to patent rights.

We are now building passenger and freight cars for several companies; and it is desirable that parties ordering give early notice of their wants.

The striking features of this principle are:—simplicity—cheapness—durability—superior safety in cases of accident—facility of repairing when damaged—and less weight compared with the wooden cars of the same capacity; these cars for 60 passengers are more than two tons lighter than the ordinary cars, while the strength is immeasurably greater.

We guarantee these points in the acceptance of orders.

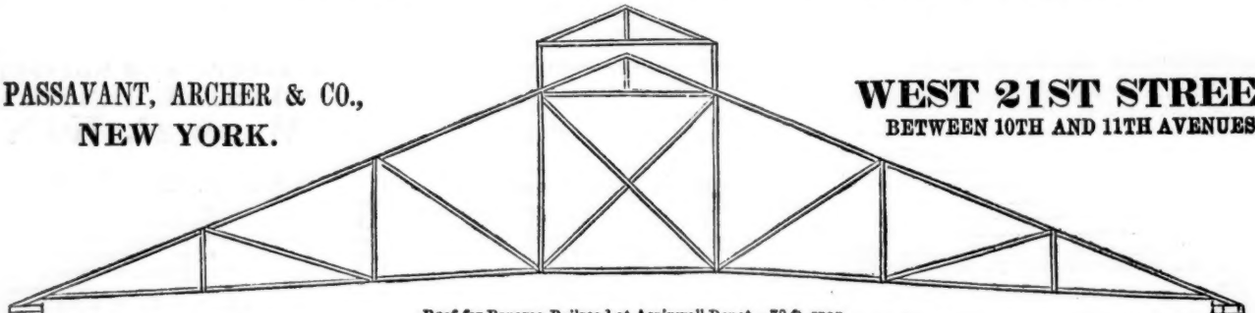
The advantages may be tested by personal observation in this city. Detailed descriptions of the cars will be forwarded to parties wishing them.

ALFRED SEARS,
Civil Engineer and Architect,
Agent.
OFFICE—9 SPRUCE ST., NEW YORK.

WROUGHT IRON ROOFING.

PASSAVANT, ARCHER & CO.,
NEW YORK.

WEST 21ST STREET,
BETWEEN 10TH AND 11TH AVENUES.



Roof for Panama Railroad at Aspinwall Depot.—78 ft. span.

Wrought Iron Roofs with Corrugated Iron, (Black or Galvanized) or Slate Covering.

PASSAVANT, ARCHER & Co. refer to many roofs put up in New York, Brooklyn, and other parts of the United States of from 12 ft. to 100 ft. span.

IRON HOUSES. IRON BRIDGE TRUSSES.
WROUGHT IRON RAILROAD CARS.

Railroad Iron Wanted.

CONTRACTOR'S OFFICE MINERAL POINT RAILROAD.
No. 31 Pine street, New York.

THE subscriber desires to purchase twelve hundred tons of T rails, Erie pattern, 56 lbs. to the yard, for which proposals are invited.

3tf A. WILKINS.

LOCOMOTIVE ENGINES FOR SALE.

THE PROVIDENCE & WORCESTER R. R. CO. offer for sale TWO LOCOMOTIVE ENGINES, in good order and in daily use. Weight of Engines twenty tons each, with 14 by 18 inch cylinders. Drivers five feet diameter. For further particulars inquire of the undersigned, at PROVIDENCE.

JOHN B. WINSLOW, *Superintendent.*
PROVIDENCE, Jan'y 10th, 1856, 2m4

IMPROVED OIL CUP.

PATENTED FEBRUARY 12TH, 1856.

THIS Oil Cup is self-feeding and provided with a transparent gauge tube—will feed as oil is wanted—is simple in construction—not easily put out of order—has no ground cocks—will last longer than any other cup in use. The best of references furnished as to its working.

NEW STEAM GAUGE on a new principle, the best thing yet designed for Steam Engines, Locomotives, &c. New self-tightening water faucets. Patent soda water apparatus, the only cast iron apparatus in the country, patented June 12, 1855

These articles are the inventions of WM. GEE, are manufactured and sold by him, and at all the principal machine shops.

Any person wishing a shop or stand in business, would do well to call on WM. GEE, who will sell the rights to make the above at fair rates, and will if desired sell his stock and tools. 58 *Fulton st., N. Y.* 4m9

Second Hand Locomotive

FOR SALE VERY LOW.

Weight 12½ tons.—4 ft. 8½ in. Gauge.—11½ in. Cylinder.—16 in. Stroke.—4 ft. Drivers.—New Tender on 6 wheels.—Engine in perfect repair.

The above will be found a very serviceable engine for gravelling, switching, lumber and coal trains, and contractors' use, and can be had on excellent terms on application to

ELLIOTT & CO.,
tf 4 William st., N.Y.

FIRE BRICK WORKS, READING, PENNA.

FIRE BRICK celebrated quality, delivered to order at the Works, Phila., or at any place in the United States.

Address: ISAAC BERTOLET,
6m37 WM. A. WELLS, *Agent*